```
=> d his

     (FILE 'HOME' ENTERED AT 10:49:24 ON 14 NOV 2001)
               SET COST OFF

     FILE 'HCAPLUS' ENTERED AT 10:51:56 ON 14 NOV 2001
               E PHOSPHOLIPID/CT
               E E20+ALL
L1         95457 S E2,E48-E59,E66-E68,E72,E74,E75,E77,E82,E83,E86-E99,E81,E113-E
L2          5358 S DIPALMITOYLPHOSPHATIDYLCHOLINE
L3             6 S DISTEROYLPHOSPHATIDYLCHOLINE
L4           984 S DISTEAROYLPHOSPHATIDYLCHOLINE
L5            26 S DIARACHIDOYLPHOSPHATIDYLCHOLINE
L6            37 S DIBEHENOYLPHOSPHATIDYLCHOLINE
L7         22788 S PHOSPHATIDYLETHANOLAMINE
L8           375 S L7 (L) (LONG CHAIN)
L9          1344 S L7 (L) SATURAT?
L10        15748 S PHOSPHATIDYLSERINE
L11         6945 S PHOSPHATIDYLGLYCEROL OR PHOSPHATIDYLGLYCERIN?
L12        27191 S PHOSPHATIDYLINOSITOL
L13         1136 S  (DIPALMITOYL OR DISTEAROYL OR DIARACHIDOYL OR DIBEHENOYL)()P
L14           61 S DIPHOSPHATIDYL () (GLYCEROL OR GLYCERIN?)
L15         1714 S PHOSPHATIDYL()(ETHANOLAMINE OR SERINE OR GLYCEROL OR GLYCERIN

     FILE 'REGISTRY' ENTERED AT 11:07:50 ON 14 NOV 2001
L16            4 S 4537-77-3 OR 4539-70-2 OR 83061-18-1 OR 64792-89-8

     FILE 'HCAPLUS' ENTERED AT 11:08:48 ON 14 NOV 2001
L17         1866 S L16
L18        56524 S PHOSPHOLIPID#/CW
L19        95313 S L17,L18,L2-L15
L20        17440 S L1 NOT L19
L21          800 S L19,L20 AND ?POWD?
L22           58 S L21 AND (?INHAL? OR ?NASAL? OR NOSE?)
L23           44 S L21 AND (RESPIR? OR BREATH? OR AIRWAY?)
L24           79 S L22,L23
L25       144065 S E2+NT OR L19 OR L20
L26          984 S L25 AND ?POWD?
L27           66 S L26 AND (?INHAL? OR ?NASAL? OR NOSE?)
L28           50 S L26 AND (RESPIR? OR BREATH? OR AIRWAY?)
L29           59 S L26 AND (LUNG OR PULMON?)
L30           23 S L26 AND BRONCH?
L31          105 S L24,L27-L30
               E RESPIR/CT
               E E8+ALL
               E E2+ALL
L32        35464 S E5-E7,E4+NT
               E E30+ALL
L33       107435 S E4+NT
               E E50+ALL
L34         3140 S E3,E2+NT
               E E13+ALL
L35         7274 S E6,E5+NT
L36           39 S L26 AND L32-L35
L37          105 S L31,L36
L38           43 S L26 AND (AEROSOL OR NEBULIZ? OR NEBULIS? OR ATOMIZ? OR ATOMIS
L39           28 S L38 AND L37
L40          105 S L37,L39
L41           15 S L38 NOT L40
L42            5 S L41 AND 63/SC
               E WEERS J/AU
L43           58 S E4,E6-E10
               E TARARA T/AU
L44           20 S E4-E6
               E CLARK A/AU
L45         1295 S E3-E49
```

Point of Contact:
Jan Delaval
Librarian-Physical Sciences
CM1 1E07 Tel: 308-4498

```
                E CLARK AND/AU
L46           185 S E6-E23
L47             6 S L43-L46 AND L21,L26
L48             4 S L47 AND L40
L49             2 S L47 NOT L48

     FILE 'REGISTRY' ENTERED AT 12:03:52 ON 14 NOV 2001
                E AMPHOTERICIN/CN
L50             2 S E7
L51             1 S E23
                SEL RN L50
L52            94 S E1-E2/CRN
                E PARATHYROID HORMONE/CN
L53             2 S E3,E5
                E BUDESONIDE/CN
L54             1 S E3
                E TOBRAMYCIN/CN
L55             2 S E3,E7
                E LEUPROLIDE/CN
L56             2 S E3,E4
L57             7 S L53-L56
                SEL RN
L58            71 S E1-E7/CRN

     FILE 'HCAPLUS' ENTERED AT 12:06:24 ON 14 NOV 2001
L59         18063 S L50,L51,L57
L60           788 S L52,L58
L61         21614 S BUDENSONIDE OR TOBRAMYCIN OR LEUPROLIDE OR AMPHOTERICIN? OR
L62            17 S L59-L61 AND L21,L26
L63            16 S L62 AND (1 OR 63)/SC,SX
L64           114 S L40,L48,L63
L65            66 S L64 AND (?NASAL? OR NOSE OR ?INHAL?)
L66            48 S L64 NOT L65
L67            28 S L65 AND DRY(S)?POWD?
L68             9 S L66 AND DRY(S)?POWD?
L69            37 S L67,L68
L70            39 S L48,L69
L71            75 S L65,L66 NOT L70
L72            34 S L70 AND 63/SC
L73             5 S L70 NOT L72
L74             4 S L73 NOT MILDEW
L75            38 S L72,L74
L76            51 S L71 AND 63/SC
L77            42 S L76 NOT (SKIN OR INTESTINAL OR SOLID OR OTITIS OR DIAGNOSTIC
L78            80 S L75,L77
L79            79 S L78 AND (PD<=20000707 OR PRD<=20000707 OR AD<=20000707)

=> fil hcaplus
FILE 'HCAPLUS' ENTERED AT 12:19:32 ON 14 NOV 2001
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2001 AMERICAN CHEMICAL SOCIETY (ACS)


Copyright of the articles to which records in this database refer is
held by the publishers listed in the PUBLISHER (PB) field (available
for records published or updated in Chemical Abstracts after December
26, 1996), unless otherwise indicated in the original publications.

FILE COVERS 1947 - 14 Nov 2001  VOL 135 ISS 21
FILE LAST UPDATED: 13 Nov 2001  (20011113/ED)

 This file contains CAS Registry Numbers for easy and accurate
 substance identification.

 This file supports REG1stRY for direct browsing and searching of
```

all substance data from the REGISTRY file. Enter HELP FIRST for more information.

HCAplus now provides online access to patents and literature covered in CA from 1947 to the present. On April 22, 2001, bibliographic information and abstracts were added for over 2.2 million references published in CA from 1947 to 1966.

=> d l78 cbib ab hitrn tot

L78 ANSWER 1 OF 80 HCAPLUS COPYRIGHT 2001 ACS
2001:780655 Formulations containing fine lactose for use in **inhaler** devices. Staniforth, John Nicholas; Morton, David Alexander Vodden; Gill, Rajbir; Brambilla, Gaetano; Musa, Rossella; Ferrarini, Lorenzo (Vectura Ltd., UK). PCT Int. Appl. WO 2001078694 A2 20011025, 63 pp. DESIGNATED STATES: W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG, TR. (English). CODEN: PIXXD2. APPLICATION: WO 2001-GB1732 20010417. PRIORITY: GB 2000-9469 20000417; EP 2000-113608 20000627.

AB A formulation for an **inhaler** device comprises carrier particles having a diam. of at least 50 .mu.m and a mass median diam. of at least 175 .mu.m; active particles; and additive material to which is able to promote release of the active particles from the carrier particles on actuation of the **inhaler** device. The formulation has excellent flowability even at relatively high fine particle contents. A formulation contained lactose, salbutamol sulfate, microfine lactose, and leucine.

L78 ANSWER 2 OF 80 HCAPLUS COPYRIGHT 2001 ACS
2001:676576 Document No. 135:231706 Pharmaceutical compositions for buccal and **pulmonary** application. Modi, Pankaj (Generex Pharmaceuticals Inc., Can.). PCT Int. Appl. WO 2001066085 A2 20010913, 28 pp. DESIGNATED STATES: W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG, TR. (English). CODEN: PIXXD2. APPLICATION: WO 2001-IB515 20010221. PRIORITY: US 2000-519285 20000306.

AB Pharmaceutical compns. comprising a macromol. pharmaceutical agent in mixed micellar form are disclosed. The mixed micelles are formed from an alkali metal alkyl sulfate, and at least 3 different micelle-forming compds. Micelle size ranges between about 1 and 10 nm. A preferred method for administering the present compn. is through the buccal region of the mouth. A soln. of **powd**. insulin (100 mg) in 10 mL water was prepd. and mixed with sodium lauryl sulfate 50, deoxycholate 36, trihydroxyoxocholanylglycine 50, and dibasic sodium phosphate 20 mg. This mixt. was then mixed with 250 mg glycerin, 40 mg m-cresol, and 40 mg phenol.

L78 ANSWER 3 OF 80 HCAPLUS COPYRIGHT 2001 ACS
2001:597778 Document No. 135:170783 Novel use of **pulmonary** surfactant for the prophylaxis and treatment of chronic **pulmonary** diseases. Haefner, Dietrich; Keller, Andreas; Rathgeb, Frank; Schaffer, Peter; Wurst, Wilhelm; Karl, Christoph (Byk Gulden Lomberg Chemische Fabrik G.m.b.H., Germany). PCT Int. Appl. WO 2001058423 A1 20010816, 14 pp. DESIGNATED STATES: W: AE, AL, AU, BA, BG, BR, CA, CN, CZ, EE, GE, HR, HU, ID, IL, IN, JP, KR, LT, LV, MK, MX, NO, NZ, PL, RO, SG, SI, SK, UA, US, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM; RW: AT, BE,

CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR. (English). CODEN: PIXXD2. APPLICATION: WO 2001-EP1485 20010210. PRIORITY: EP 2000-102858 20000211.

AB The invention describes the novel use of **pulmonary** surfactant prepns. for the prophylaxis or treatment of chronic **pulmonary** diseases in mammals. A **powder** compn. was prepd. contg. 1,2-dipalmitoyl-3-sn-phosphatidylcholine, 1-palmitoyl-2-oleoyl-3-sn-**phosphatidylglycerol** sodium, CaCl2.2H2O, and palmitic acid.

IT **63-89-8, Dipalmitoylphosphatidylcholine**
RL: PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(**pulmonary** surfactant for the prophylaxis and treatment of chronic **pulmonary** diseases)

L78 ANSWER 4 OF 80 HCAPLUS COPYRIGHT 2001 ACS
2001:472513 Document No. 135:66252 Manufacture of particulate drug-containing products. Etter, Jeffrey B. (Rxkinetix, Inc., USA). PCT Int. Appl. WO 2001045731 A1 20010628, 63 pp. DESIGNATED STATES: W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG, TR. (English). CODEN: PIXXD2. APPLICATION: WO 2000-US34436 20001218. PRIORITY: US 1999-469733 19991221; US 2000-604786 20000626.

AB A compressed anti-solvent technique for manuf. of drug-contg. **powders** for **pulmonary** delivery. The drug is processed in a cosolvent system including 2 or more mutually sol. org. solvents. Also provided are **powders** manufacturable by the manuf. method, including **powders** of substantially pure drug and **powders** including a biocompatible polymer for **pulmonary** sustained drug release applications. Also provided are packaged products including drug-contg. **powder** in a container that is receivable by and operable with a **dry powder inhaler** to produce an **aerosol** including dispersed drug-contg. particles when the **inhaler** is actuated. The pharmaceutical **powders** prepd. using the cosolvent system of DMSO and MeOH (50:50), human insulin dissolved in the mixt. of solvents were free flowing and desirable for use in **pulmonary** delivery applications.

IT **2644-64-6**, DPPC
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(manuf. of particulate drug-contg. products)

L78 ANSWER 5 OF 80 HCAPLUS COPYRIGHT 2001 ACS
2001:434833 Document No. 135:37191 Compositions for **intranasal** delivery of active agents to the brain. Gore, Stanley L. (Can.). PCT Int. Appl. WO 2001041732 A1 20010614, 95 pp. DESIGNATED STATES: W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG, TR. (English). CODEN: PIXXD2. APPLICATION: WO 2000-CA1311 20001103. PRIORITY: US 1999-PV168762 19991206; US 2000-703667 20001102.

AB The present invention relates to a method for delivering at least one active agent to the brain of a mammal. The method comprises administering the at least 1 active agent to the **nasal** mucosa of the mammal, wherein the the active agent is absorbed through 1 area of **nasal** epithelium to 1 group of nerve fibers and delivered along 1 neural pathway into the brain of the mammal. The active agent is preferably administered in the form of a compn. contg. a carrier. A female subject was

experiencing the following perimenopausal symptoms: hot flashes, short-term memory loss, fuzzy thinking. She applied 0.1 .mu.g 17.beta.-estradiol **intranasally** per day. She noted a decrease in frequency of hot flashes, an improvement in short-term memory and disappearance of fuzzy thinking. Symptoms returned when she ceased use of the estrogen product. Transneuronal transport allows substances which cannot reach the brain through the traditional route of blood-brain barrier transport to do so.

L78 ANSWER 6 OF 80 HCAPLUS COPYRIGHT 2001 ACS
2001:416419 Document No. 135:24688 **Lung** surfactant composition for the treatment of Legionella disease. Hummel, Rolf-Peter; Schaffer, Peter (Byk Gulden Lomberg Chemische Fabrik G.m.b.H., Germany). Ger. Offen. DE 19957898 A1 20010607, 4 pp. (German). CODEN: GWXXBX. APPLICATION: DE 1999-19957898 19991201.

AB The invention concerns **lung** surfactant compns. for the treatment of Legionella disease that contains phospholipids and/or **lung** surfactant proteins SP-B and/or SP-C, or lusupultides. The compn. is administered for the prophylaxis of acute **lung** injury (ALI) and adult **respiratory** distress syndrome (ARDS). Thus the following was prepd. (g); 1,2-dipalmitoyl-3-sn-phosphatidylcholine 7.0; 1-palmitoyl-2-oleoyl-3-sn-phosphaditylglycerol sodium 2.5; calcium chloride hydrate 250; palmitic acid 250. The components were dissolved in 300 mL ethanol-water (85:15) and mixed with 350 mL rSP-C soln., c = 429 mg/L in chloroform-methanol(9:1) and spray-dried.

IT **63-89-8**, 1,2-Dipalmitoyl-3-sn-phosphatidylcholine
26853-31-6, 1-Palmitoyl-2-oleoyl-sn-3-phosphocholine
RL: BAC (Biological activity or effector, except adverse); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(**lung** surfactant compn. for treatment of Legionella disease)

L78 ANSWER 7 OF 80 HCAPLUS COPYRIGHT 2001 ACS
2001:152464 Document No. 134:198097 Modulation of release from **dry powder** formulations. Basu, Sujit K.; Hrkach, Jeffrey S.; Caponetti, Giovanni; Lipp, Michael M.; Elbert, Katharina; Li, Wen-I. (Advanced Inhalation Research, Inc., USA). PCT Int. Appl. WO 2001013891 A2 20010301, 49 pp. DESIGNATED STATES: W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG. (English). CODEN: PIXXD2. APPLICATION: WO 2000-US23048 20000823. PRIORITY: US 1999-PV150742 19990825.

AB Particles which include a bioactive agent are prepd. to have a desired matrix transition temp. Delivery of the particles via the **pulmonary** system results in modulation of drug release from the particles. Sustained release of the drug can be obtained by forming particles which have a high matrix transition temp., while fast release can be obtained by forming particles which have a low matrix transition temp. Preferred particles include one or more phospholipids. Thus, 20% albumin was mixed with 80% 1,2-dipalmitoyl-sn-glycero-3-phosphatidylcholine (I) or 1,2-distearoyl-sn-glycero-phosphahtdiylcholine (II) and spray-dried using 70% ethanol and 30% water. Matrix transition temp. for particles formulated with I was lower than that for particles formulated with II.

IT **816-94-4 18194-24-6**
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(modulation of release from **dry powder** formulations)

L78 ANSWER 8 OF 80 HCAPLUS COPYRIGHT 2001 ACS
2001:109578 Document No. 135:24556 Influence of formulation excipients and physical characteristics of **inhalation dry**

powders on their aerosolization performance. Bosquillon, C.; Lombry, C.; Preat, V.; Vanbever, R. (School of Pharmacy, Department of Pharmaceutical Technology, Universite catholique de Louvain, Brussels, 1200, Belg.). J. Controlled Release, 70(3), 329-339 (English) 2001. CODEN: JCREEC. ISSN: 0168-3659. Publisher: Elsevier Science Ireland Ltd..

AB The objective of this study was to det. the effects of formulation excipients and phys. characteristics of **inhalation** particles on their in vitro aerosolization performance, and thereby to maximize their **respirable** fraction. **Dry powders** were produced by spray-drying using excipients that are FDA-approved for **inhalation** as lactose, materials that are endogenous to the **lungs** as albumin and **dipalmitoylphosphatidylcholine** (DPPC); and/or protein stabilizers as trehalose or mannitol. **Dry powders** suitable for deep **lung** deposition, i.e., with an aerodynamic diam. of individual particles <3 .mu.m, were prepd. They presented 0.04-0.25 g/cm3 bulk tap densities, 3-5 .mu.m geometric particle sizes, up to 90% emitted doses and 50% **respirable** fractions in the Andersen cascade impactor using a **Spinhaler inhaler** device. The incorporation of lactose, albumin and DPPC in the formulation all improved the aerosolization properties, in contrast to trehalose and the mannitol which decreased **powder** flowability. The relative proportion of the excipients affected **aerosol** performance as well. The lower the bulk **powder** tap d., the higher the **respirable** fraction. Optimization of in vitro aerosolization properties of **inhalation dry powders** can be achieved by appropriately selecting compn. and phys. characteristics of the particles.

IT **2644-64-6**, DPPC
RL: PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(formulation excipients and phys. characteristics of **inhalation dry powders** effect on aerosolization performance)

L78 ANSWER 9 OF 80 HCAPLUS COPYRIGHT 2001 ACS
2001:50462 Document No. 134:105872 **Dry powder** pharmaceutical compositions containing hydrophobically-derivatized carbohydrate. Jackson, Peter (Quadrant Holdings Cambridge Limited, UK). PCT Int. Appl. WO 2001003673 A1 20010118, 15 pp. DESIGNATED STATES: W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG. (English). CODEN: PIXXD2. APPLICATION: WO 2000-GB2661 20000711. PRIORITY: GB 1999-16316 19990712.

AB A hydrophilic therapeutic agent is prepd. in storage-stable form, suitable for administration to a patient. The agent is formulated with a hydrophobically-derivatized carbohydrate, making use of ion-pair formation to form a soln. of the agent and carbohydrate. An .alpha.-chymotrypsin compn. was prepd. using trehalose octaacetate.

IT **53714-56-0, Leuprolide**
RL: PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(**dry powder** pharmaceutical compns. contg. hydrophobically-derivatized carbohydrate)

L78 ANSWER 10 OF 80 HCAPLUS COPYRIGHT 2001 ACS
2001:50460 Document No. 134:120933 Method for producing **powdered** formulations with the aid of compressed gases. Heidlas, Jurgen; Ober, Martin; Wiesmuller, Johann (SKW Trostberg Aktiengesellschaft, Germany). PCT Int. Appl. WO 2001003671 A2 20010118, 17 pp. DESIGNATED STATES: W: JP, US; RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE. (German). CODEN: PIXXD2. APPLICATION: WO 2000-EP6709

20000713. PRIORITY: DE 1999-19932648 19990713; DE 1999-19960167 19991214.
AB The invention relates to the prodn. of **powd.** formulations with the aid of compressed gases. The inventive method is characterized in that the solid compd. to be formulated, said compd. consisting of a poorly sol. and mostly bioactive substance, is homogeneously comminuted together with 10-99 wt. % (with regard to the formulation) of a supporting material, which is essentially sol. in the compressed gas mixt., in an agitating autoclave provided with a mech. comminution device in the presence of compressed gas or mixts. thereof, at method temps. ranging from 10 to 200 .degree.C, and under method pressures ranging from 5 to 500 bar, and, in a second method step; the compressed gas mixt., consisting mostly of di-Me ether, pure propane and/or carbon dioxide, is expanded by lowering the pressure and is sepd. away from the homogenate that can also be provided in the form of a molten material. Finally, the **powdery** particle-reduced formulation is obtained from the resulting homogenate and exhibits significant improvements with regard to soly. properties and esp. with regard to the biol. availability of compds. which, initially, are poorly sol. or insol.

L78 ANSWER 11 OF 80 HCAPLUS COPYRIGHT 2001 ACS
2000:754416 Document No. 133:325632 **Powdered** pharmaceutical formulations having improved dispersibility. Eljamal, Mohammad; Patton, John S.; Foster, Linda; Platz, Robert M. (Inhale Therapeutic Systems, USA). U.S. US 6136346 A 20001024, 19 pp., Cont.-in-part of U.S. Ser. No. 423,568, abandoned. (English). CODEN: USXXAM. APPLICATION: US 1998-945872 19980317. PRIORITY: US 1995-423568 19950414; WO 1996-US5265 19960415.
AB Dispersibility of a **respirable powder**, administrable by **inhalation**, is increased by including a pharmaceutically acceptable water-sol. polypeptide. An example is given describing the effect of adding a suitable physiol.-acceptable protein, human serum albumin, to a liposome/mannitol compn. to improve the dispersibility characteristics.
IT **2462-63-7**, Dope
RL: MOA (Modifier or additive use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(**powd.** pharmaceutical formulations having improved dispersibility)

L78 ANSWER 12 OF 80 HCAPLUS COPYRIGHT 2001 ACS
2000:740975 Document No. 133:301203 Process and device for **dry** administration of **inhalable powder**. Scheuch, Gerhard; Sommerer, Knut (Gsf-Forschungszentrum fur Umwelt und Gesundheit, G.m.b.H., Germany). Eur. Pat. Appl. EP 1044692 A1 20001018, 10 pp. DESIGNATED STATES: R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO. (German). CODEN: EPXXDW. APPLICATION: EP 2000-107004 20000330. PRIORITY: DE 1999-19917347 19990416.
AB A process for the delivery of labeled compds. and drugs in **inhalable powder** forms consists of dissoln. of the substance in a liq., **atomization** of the liq., drying of the **aerosol** drops and contacting the **aerosol** particles obtained with a carrier substance. Albumin and estradiol and DPPC were used for the prodn. of **aerosol** particles.
IT **2644-64-6**, DPPC
RL: PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(process and device for **dry** administration of **inhalable powders**)

L78 ANSWER 13 OF 80 HCAPLUS COPYRIGHT 2001 ACS
2000:706335 Document No. 133:271748 Compressed air **inhaler** device for dosing liposome **powder aerosol** in treating **lung** diseases and compositions of **powder aerosols**. Diederichs, Julia Eva; Koch, Wolfgang; Loedding, Hubert; Reszka, Regina; Windt, Horst (Max-Delbrueck-Centrum fuer Molekulare Medizin, Germany; Fraunhofer-Gesellschaft zur Foerderung der

Angewandten Forschung e.V.). Ger. Offen. DE 10004860 A1 20001005, 8 pp. (German). CODEN: GWXXBX. APPLICATION: DE 2000-10004860 20000203. PRIORITY: DE 1999-19905285 19990203; DE 1999-19954107 19991102.

AB The invention concerns an **inhaler** for the delivery of **lung** disease drugs in the form of liposomal **powders** from an aq. soln. comprizing a container for the soln., a **nebulizer**, compressed air to avoid strenuous **inhaling**, a spray drying unit and a mouth piece. The sprayed **aerosol powder** is **dry**, does not contain cryoprotectors, the particles are spheric and have amorphous or cryst. structure and their size is 0.5-10 .mu.m. The **powder aerosol** is composed of liposomes and/or nanoparticles. The compn. contains phospholipids, cholesterol, **pulmonary** surfactants or cationic amphiphiles, and the drug. The liposome **powder** liposomes are multilamellar vesicles (MLV) or small unilamellar vesicles (SUV). Nanoparticles are either the drug components or polymers that carry the drugs. Liposomes and nanoparticles can be surface-modified; modifiers are PEG, plasma proteins, surfactant-assocd. proteins, antibodies. furthermore the subject of the invention is consisting a new **powder aerosol**, of Liposomen or nano-particles.

IT **2462-63-7**, 9-Octadecenoic acid (9Z)-, 1-[[[(2-aminoethoxy)hydroxyphosphinyl]oxy]methyl]-1,2-ethanediyl ester
RL: PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(compressed air **inhaler** device for dosing liposome **powder aerosol** in treating **lung** diseases and compns. of **powder aerosols**)

L78 ANSWER 14 OF 80 HCAPLUS COPYRIGHT 2001 ACS

2000:659327 Document No. 134:141585 Suppression of neural activity of **bronchial** irritant receptors by surface-active phospholipid in comparison with topical drugs commonly prescribed for asthma. Hills, B. A.; Chen, Y. (Paediatric Respiratory Research Centre, Mater Children's Hospital, Brisbane, 4101, Australia). Clin. Exp. Allergy, 30(9), 1266-1274 (English) 2000. CODEN: CLEAEN. ISSN: 0954-7894. Publisher: Blackwell Science Ltd..

AB Much indirect evidence was put forward previously in support of the concept that surface-active phospholipid (SAPL) normally masks irritant receptors in the **lungs** and upper **respiratory** tract; but this phys. barrier is deficient in asthmatics, imparting hyperresponsiveness of the **bronchoconstrictor** reflex. To det. whether exogenous SAPL applied to **bronchial** mucosa reduces the sensitivity of irritant receptors to a std. challenge used clin. to diagnose asthma and to compare the effects with those of corticosteroids and .beta.-stimulation. Nerve fibers in the vagi were monitored to record action potentials from irritant receptors identified in the upper **airways** of rat **lungs** in response to a methacholine challenge. SAPL in the form of **dipalmitoyl phosphatidylcholine** (PC) and **phosphatidylglycerol** (PG) -7: 3 PC:PG - was applied as a fine **dry powder** to enhance surface activity and, hence, chemisorption to epithelium. Comparison was also made with clin. doses of i.v. hydrocortisone and instilled salbutamol together with liq. or solid controls, as appropriate. Neural activity of irritant receptors was found to be decreased by topical SAPL by 35.8% in response to a methacholine challenge in contrast to an increase of 11.2% in response to a solid (lactose) control. Instilled salbutamol and i.v. hydrocortisone also decreased responses to the same challenge by 43.4 and 14.7%, resp., in contrast to a liq. (saline) control which increased by 24.5%. Surface-active phospholipid has an appreciable effect upon irritant receptors in rat **airways**, reducing neural response to a methacholine challenge by an amt. comparable to that of salbutamol. These results support the concept of SAPL masking **bronchial** irritant receptors and warrant placebo-controlled clin. trials of this **dry powder** as a means of controlling asthma without the side-effects of current medication. Other possible roles discussed for the SAPL epithelial barrier include the exclusion of

viruses and allergens.

IT **63-89-8, Dipalmitoyl phosphatidylcholine**
RL: BAC (Biological activity or effector, except adverse); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(suppression of neural activity of **bronchial** irritant receptors by surface-active phospholipids)

L78 ANSWER 15 OF 80 HCAPLUS COPYRIGHT 2001 ACS
2000:441561 Document No. 133:68962 Treatment of chronic obstructive **airway** diseases. Boucher, Richard C.,Jr. (The University of North Carolina At Chapel Hill, USA). PCT Int. Appl. WO 2000036915 A1 20000629, 21 pp. DESIGNATED STATES: W: AE, AL, AM, AT, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, CZ, DE, DE, DK, DK, EE, EE, ES, FI, FI, GB, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG. (English). CODEN: PIXXD2. APPLICATION: WO 1999-US30585 19991221. PRIORITY: US 1998-PV113785 19981222; US 1999-PV137991 19990607.

AB Chronic obstructive **airway** diseases are treated by administering an osmotically-active compd. such as a salt, sugar, sugar alc., or org. osmolyte to the afflicted **airway** surface. The compd. may be administered as a liq. or **dry powder aerosol** formulation. Diseases that can be treated by the method include cystic fibrosis, chronic **bronchitis**, and ciliary dyskinesia. The formulations of the invention can also be used in conjunction with other active agents such as **bronchodilators**, sodium channel blockers, antibiotics, enzymes, or purinoceptor agonists on **airway** surfaces.

IT **563-24-6**, Glycerophosphorylcholine
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(treatment of chronic obstructive **airway** diseases using)

L78 ANSWER 16 OF 80 HCAPLUS COPYRIGHT 2001 ACS
2000:401627 Document No. 133:34447 Administration of neurotrophic agents to the central nervous system. Frey, William H., II (Chiron Corporation, USA). PCT Int. Appl. WO 2000033813 A1 20000615, 62 pp. DESIGNATED STATES: W: AE, AL, AM, AT, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, CZ, DE, DE, DK, DK, DM, EE, EE, ES, FI, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG. (English). CODEN: PIXXD2. APPLICATION: WO 1999-US29334 19991209. PRIORITY: US 1998-208538 19981209.

AB The present invention is directed to a formulation and a dosing regimen for delivering neurotrophic agents to the central nervous system by way of the **nasal** cavity. Such a formulation and dosing regimen can be useful in the treatment of central nervous system and/or brain disorders. For example, **intranasal** administration was an effective method of delivering NGF to the brain, trigeminal nerve and spinal cord. Following **intranasal** administration, 125I-NGF was shown to be in trigeminal nerve and in the dura that surrounds the trigeminal nerve as well as in the deep cervical lymph nodes, suggesting that **intranasally** administered NGF moved from the **nasal** cavity across the **nasal** mucosa into dural lymphatics that travel along the trigeminal nerve and then into dural lymphatics surrounding the spinal cord. Thus delivery to the spinal cord occur along the trigeminal neural pathway. The observation of radiolabel in the common carotid and circle of Willis suggests that some transport may also occur through hemangiolymphatic pathways.

L78 ANSWER 17 OF 80 HCAPLUS COPYRIGHT 2001 ACS
2000:368110 Document No. 133:9136 Antiasthmatic combinations comprising

surface active phospholipids. Hills, Brian Andrew; Woodcock, Derek Alan; Staniforth, John Nicholas (Britannia Pharmaceuticals Limited, UK). PCT Int. Appl. WO 2000030654 A1 20000602, 38 pp. DESIGNATED STATES: W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG. (English). CODEN: PIXXD2. APPLICATION: WO 1999-GB3952 19991126. PRIORITY: WO 1998-GB3543 19981126; GB 1999-12639 19990528.

AB A combination product for use in treating asthma and other **respiratory** conditions comprising a medicament comprising a surface active phospholipid compn. in the form of a fine **powder** and an antiasthma drug. The product is administered to the **lungs** by an **inhalation** device. Increased binding of **dipalmitoylphosphatidylcholine** to **bronchial** epithelium was obsd. in the presence of dipalmitoylphosphatidylglycerol (DPPG) but the extent of binding was improved further when egg **phosphatidylglycerol** was used instead of DPPG.

IT **63-89-8**, **Dipalmitoylphosphatidylcholine**
4537-77-3, Dipalmitoylphosphatidylglycerol
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(antiasthmatic combinations comprising surface active phospholipids)

L78 ANSWER 18 OF 80 HCAPLUS COPYRIGHT 2001 ACS
2000:351357 Document No. 133:9107 **Dry powder** for **inhalation**. Keller, Manfred; Mueller-Walz, Rudi (Skyepharma A.-G., Switz.). PCT Int. Appl. WO 2000028979 A1 20000525, 44 pp. DESIGNATED STATES: W: AU, CA, CN, CZ, HU, IN, JP, NO, NZ, PL, RO, RU, SK, US, ZA; RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE. (German). CODEN: PIXXD2. APPLICATION: WO 1999-CH528 19991110. PRIORITY: CH 1998-2286 19981113.

AB The moisture resistance of **dry powder** formulations for **inhalation**, which contain a pharmaceutically inert carrier of **noninhalable** particle size and a finely divided pharmaceutical substance of **inhalable** particle size, is improved and the storage stability of the formulations is increased by adding Mg stearate to minimize the deleterious effect of moisture on fine particle dose and fine particle fraction even under relatively extreme temp. and humidity conditions. Thus, 198.46 g lactose-H2O (particle size 100% <200 .mu.m, 50% <125 .mu.m, 10% <75 .mu.m) was mixed with 1 g sieved Mg stearate, then with 0.54 g formoterol fumarate-2H2O, and loaded into a multidose **dry powder inhaler**.

IT **51333-22-3**, Budesonide
RL: BAC (Biological activity or effector, except adverse); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(**dry powder** for **inhalation**)

IT **65154-06-5**, Blood platelet-activating factor
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(inhibitors; **dry powder** for **inhalation**)

L78 ANSWER 19 OF 80 HCAPLUS COPYRIGHT 2001 ACS
2000:335213 Document No. 132:339370 Treatment set containing **lung** surfactant compositions. Germann, Paul-Georg; Rupp, Herbert; Eistetter, Klaus; Kilian, Ulrich; Hafner, Dietrich (Byk Gulden Lomberg Chemische Fabrik G.m.b.H., Germany). PCT Int. Appl. WO 2000027360 A1 20000518, 20 pp. DESIGNATED STATES: W: AE, AL, AU, BA, BG, BR, CA, CN, CZ, EE, GE, HR, HU, ID, IL, IN, JP, KR, LT, LV, MK, MX, NO, NZ, PL, RO, SG, SI, SK, TR, UA, US, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM; RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE. (English). CODEN: PIXXD2. APPLICATION: WO 1999-EP8567 19991109. PRIORITY: EP 1998-121324 19981110.

AB The invention describes a set for the treatment of IRDS, ALI (acute **lung** injury) or ARDS, comprising a first container which has a

vol. of 50 to 500 mL and contains a pulverulent **pulmonary** surfactant prepn., the amt. of phospholipids in the container being 50 to 500 mg, and a second container which has a vol. of 50 to 500 mL and contains a pulverulent **pulmonary** surfactant prepn., where the amt. of phospholipids in the second container is 1 to 10 g. For example, a **pulmonary** surfactant **powder** formulation was prepd. by dissolving 7.0 g of **dipalmitoylphosphatidylcholine**, 2.5 g palmitoyloleoylphosphatidylethanolamine sodium, 205 mg CaCl2.cntdot.2H2O, and 250 mg of palmitic acid in 300 mL of EtOH/H2O (85:15) with warming at 60.degree., cooling to room temp., and mixing with 350 mL of a soln. of rSP-C **pulmonary** surfactant in CHCl3/MeOH (9:1), i.e. .apprx.429 mg/L. The resulting soln. was spray dried to give a loose **powder** .

IT **63-89-8, Dipalmitoylphosphatidylcholine**
26853-31-6, 1-Palmitoyl-2-oleoylphosphatidylcholine
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(set contg. **powd. lung** surfactants and phospholipids for treatment of **lung** diseases)

db 11-19-01

L78 ANSWER 20 OF 80 HCAPLUS COPYRIGHT 2001 ACS
2000:298364 Document No. 133:109840 **Inhalation** system for **pulmonary aerosol** drug delivery in rodents using large porous particles. Ben-Jebria, Abdellaziz; Eskew, Mary Lou; Edwards, David A. (Department of Chemical Engineering, The Pennsylvania State University, University Park, PA, 16802, USA). Aerosol Sci. Technol., 32(5), 421-433 (English) 2000. CODEN: ASTYDQ. ISSN: 0278-6826. Publisher: Taylor & Francis.

AB The **pulmonary** system is an attractive noninvasive route for effective delivery of drugs for both local and systemic therapies. In this study, an **inhalation** system was developed to effectively aerosolize and deliver small amts. (typically 1-5 mg) of **dry powder** polymeric and nonpolymeric particles to the **lungs** of anesthetized rodents over a very short period of time using a ventilator while the animals **breathed** spontaneously. The new **aerosols** were designed for size, porosity, and lightness and were characterized by particles of low mass d. (.rho. .ltoreq. 0.1 g/cm3) and large size (d .apprx. 10 .mu.m). The **inhalation** system was tested in vivo to det. (1) whether the relatively efficient in vitro aerosolization of these large porous particles translated into a substantial **respirable** fraction in vivo; (2) whether the bioavailability of an encapsulated drug for systemic therapy could be increased and the drug release in the systemic circulation could be sustained; and (3) whether an encapsulated drug for local asthma therapy could sustain **bronchodilation** over a prolonged time period. Unlike the conventional (small nonporous) particles which deposit primarily in the tubing and trachea (80% of all particle mass delivered), 55% of the large porous particle mass deposited in the deep **lung** . The total systemic bioavailabilities of **inhaled** porous estradiol, insulin, and testosterone relative to s.c. injections were 86%, 88%, and 177%, resp. The **inhaled dry powder** albuterol sulfate **aerosol** was capable of preventing sustained **bronchoconstriction** (in response to carbachol challenge) for approx. one day. Our data indicate that the exptl. **inhalation** system we developed will be an excellent device for further testing of new therapeutics available in particulate form.

IT **63-89-8, Dipalmitoyl phosphatidylcholine**
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(**inhalation** system for **pulmonary aerosol** drug delivery in rodents using large porous particles)

L78 ANSWER 21 OF 80 HCAPLUS COPYRIGHT 2001 ACS
2000:190959 Document No. 132:227474 Phospholipids, cyclodextrins, starch, and cellulose as hygroscopic growth inhibitors in **dry powders** for **pulmonary** drug delivery. **Clark, Andrew**; Kuo, Mei Chang; Lalor, Cecily (Inhale Therapeutic Systems, Inc., USA). PCT Int. Appl. WO 2000015262 A1 20000323, 46 pp. DESIGNATED

STATES: W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG. (English). CODEN: PIXXD2. APPLICATION: WO 1999-US21109 19990913. PRIORITY: US 1998-PV100163 19980914.

AB Particulate compns. for delivering an active agent to the **lung** of a human patient comprise (i) an active agent and (ii) a hygroscopic growth inhibitor (HGI), such as double chain phospholipids, cyclodextrins, hydroxyethyl starch, dextran, dextranomer, maltodextrin, and celluloses. The active agent formulation is in a **dry powder** form and exhibits (i) low moisture sorption, and (ii) a resistance to hygroscopic growth, particularly under simulated **lung** conditions, thereby increasing deposition at the peripheral **lung** and increasing the in-**lung** bioavailability of an active agent delivered **pulmonary**. E.g., salmon calcitonin was dissolved in Na citrate buffer contg. mannitol and human serum albumin (HSA) and spray dried to obtain **dry powder** (5% calcitonin/6.25% HSA/73.5% mannitol/15% citrate, by wt.). Calcitonin **powders** which maintain mass median aerodynamic diam. (MMAD) of 3.0 .mu. when delivered to the alveoli were prepd. by incorporation of one or more HGIs into the particles at concns. of 10-90%, by wt.

L78 ANSWER 22 OF 80 HCAPLUS COPYRIGHT 2001 ACS

2000:147131 Document No. 132:284178 Sustained release of insulin from insoluble **inhaled** particles. Vanbever, Rita; Ben-Jebria, Abdellaziz; Mintzes, Jeffrey D.; Langer, Robert; Edwards, David A. (Department of Chemical Engineering, Massachusetts Institute of Technology, Cambridge, MA, USA). Drug Dev. Res., 48(4), 178-185 (English) 1999. CODEN: DDREDK. ISSN: 0272-4391. Publisher: Wiley-Liss, Inc..

AB Conventional slow-acting insulin prepns. for s.c. injection, e.g., suspensions of the complex with protamine and/or zinc, were reformulated as **dry powders** for **inhalation** and the insol. **aerosol** tested for providing sustained insulin plasma levels. Large porous particles made of lactose, albumin, and **dipalmitoylphosphatidylcholine**, and incorporating insulin, protamine, and/or zinc chloride were prepd. using spray-drying. Integrity of insulin after spray-drying and insulin insolubilization in spray-dried particles was verified in vitro. The pharmacokinetic profile of the formulation delivered by **inhalation** and s.c. injection was assessed in vivo in the rat. The formulation process of insulin as **dry powders** did not alter insulin integrity and did not impede, in most cases, insulin insolubilization by protamine and/or zinc. Large porous insulin particles presented 7 .mu.m mass mean geometric particle diams., 0.1 g/cm3 bulk **powder** tap densities and theor. aerodynamic diams. suitable for deep **lung** deposition (in the range of 2.2-2.5 .mu.m). The **dry powders** exhibited 40% **respirable** fractions in the Andersen cascade impactor and 58-75% in the Aero-**Breather**. Insol. **inhaled** insulin provided sustained insulin plasma levels for half a day, similar to injected insulin, and had a bioavailability of 80.5% relative to s.c. injection of the same formulation.

IT **2644-64-6, Dipalmitoylphosphatidylcholine**
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(sustained release of insulin from insol. **inhaled** particles)

L78 ANSWER 23 OF 80 HCAPLUS COPYRIGHT 2001 ACS

1999:819221 Document No. 132:69326 Large porous particles emitted from an **inhaler**. Edwards, David A.; Batycky, Richard P.; Caponetti, Giovanni (Advanced Inhalation Research, Inc., USA). PCT Int. Appl. WO 9966903 A2 19991229, 68 pp. DESIGNATED STATES: W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,

LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG. (English). CODEN: PIXXD2. APPLICATION: WO 1999-US14074 19990622. PRIORITY: US 1998-90454 19980624.

AB Particles incorporating a surfactant and/or a hydrophilic or hydrophobic complex of a pos. or neg. charged therapeutic agent and a charged mol. of opposite charge for drug delivery to the **pulmonary** system, and methods for their synthesis and administration are provided. In a preferred embodiment, the particles are made of a biodegradable material and have a tap d. <0.4 g/cm3 and a mass mean diam. between 5 and 30 .mu.m, which together yield an aerodynamic diam. of the particles of between approx. 1 and 5 .mu.. The particles may be formed of biodegradable materials such as biodegradable polymers. The particles may be formed of poly(lactic acid) or poly(glycolic acid) or copolymers. Alternatively, the particles may comprise a therapeutic, prophylactic or diagnostic agent and a material selected from the group consisting of surfactant and a mol. having a charge opposite to the charge of the agent and forming a complex. Exemplary surfactants include phosphoglycerides such as **dipalmitoylphosphatidylcholine** (DPPC). The particles are administered to the **respiratory** tract to permit systemic or local delivery of a wide variety of therapeutic agents. Aggregation of particles before or during administration to the **respiratory** tract results in particles having an aerodynamic diam. larger than that of the fully dispersed particles. Aerodynamic diams. between 3 and 5 .mu. are advantageous for delivery to the central **airways**. Particles were prepd. by spray drying a soln. that contains 20% human albumin, 20% lactose, and 60% DPPC by wt. The human albumin and lactose were dissolved in deionized water and the DPPC was dissolved in 95% ethanol. The 2 solns. were combined to form an 85% ethanol soln. The total **powder** concn. was about 0.1% wt./vol. The soln. was spray dried under the following conditions; the inlet temp. was 110.degree.; the outlet temp. was 600.degree.; the **atomization** pressure was 3 kp/cm2(42.72 psi); and the feed rate was 40 mL/min. The yield was 45.0% and the tap d. of this particle is 0.05 g/mL, and the approx. vol.-av. size of this particle from the SEM was 7 .mu.m, thus giving an approx. aerodynamic diam. of 1.6 .mu.m. Aerosilization studies of this particle yielded the following results; aerosolized fraction was 58.5%; **respirable** fraction was 26.6%, and **respirable** fraction of **inhaled aerosol** was 43.8%.

IT **63-89-8**, DPPC
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(large porous particles emitted from **inhaler**)

L78 ANSWER 24 OF 80 HCAPLUS COPYRIGHT 2001 ACS
1999:761511 Document No. 132:6343 **Dry-powder** compositions and methods for nucleic acid delivery to the **lung**.
Eljamal, Mohammed; Patton, John S.; Foster, Linda; Platz, Robert M.
(Inhale Therapeutic Systems, Inc., USA). U.S. US 5994314 A 19991130, 10 pp., Cont.-in-part of U.S. Ser. No. 417,507, abandoned. (English).
CODEN: USXXAM. APPLICATION: US 1995-422563 19950414. PRIORITY: US 1993-44358 19930407; US 1995-417507 19950404.

AB A **dry powder** compn. comprises insol. nucleic acid constructs dispersed within a hydrophilic excipient material, where the **powder** particles have an av. size in the range from 0.5 .mu.m to 50 .mu.m. Nucleic acid constructs may comprise bare nucleic acid mols., viral vectors, or vesicle structures. The hydrophilic excipient material will be selected to stabilize the nucleic acid mols. in the constructs, enhance dispersion of the nucleic acid in **dry powder** **aerosols**, and enhance wetting of the nucleic acid constructs as they are delivered to moist target locations within the body.

IT **2462-63-7**, Dope
RL: PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(**dry-powder** compns. and methods for nucleic acid

delivery to the **lung**)

L78 ANSWER 25 OF 80 HCAPLUS COPYRIGHT 2001 ACS
1999:736228 Document No. 131:342026 Use of nanodispersions in pharmaceutical compositions. Supersaxo, Andreas Werner; Weder, Hans Georg; Hueglin, Dietmar; Roeding, Joachim Friedrich (Ciba Specialty Chemicals Holding Inc., Switz.; Vesifact A.-G.). Eur. Pat. Appl. EP 956853 A2 19991117, 16 pp. DESIGNATED STATES: R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO. (German). CODEN: EPXXDW. APPLICATION: EP 1999-810383 19990504. PRIORITY: EP 1998-810422 19980511.
AB Nanodispersions contg. a membrane-forming mol. (e.g. a phospholipid or ceramide), an oil-in-water coemulsifier, and a lipophilic component are useful as drug delivery vehicles. The nanodispersions are prepd. by mixing these 3 components to form a homogeneous clear liq., and adding this liq. to an aq. phase at room temp., which approximates the phase inversion temp.; the nanodispersion (mean particle size <50 nm) forms with no further energy expenditure for homogenization, sonication, etc. Thus, vitamin A palmitate 4.50, Miglyol 812 30.00, and Polysorbate 80 34.00 wt. parts were combined and mixed with a soln. of soybean lecithin 17.30 in EtOH 14.20 wt. parts to produce a homogeneous clear liq. This liq. was mixed 1:9 with 10 mM phosphate buffer (pH 7.4) at 50.degree. with stirring to produce a nanodispersion.

L78 ANSWER 26 OF 80 HCAPLUS COPYRIGHT 2001 ACS
1999:725322 Document No. 132:54774 Formulation and physical characterization of large porous particles for **inhalation**. Vanbever, Rita; Mintzes, Jeffrey D.; Wang, Jue; Nice, Jacquelyn; Chen, Donghao; Batycky, Richard; Langer, Robert; Edwards, David A. (Department of Chemical Engineering, Massachusetts Institute of Technology, Cambridge, MA, 02139, USA). Pharm. Res., 16(11), 1735-1742 (English) 1999. CODEN: PHREEB. ISSN: 0724-8741. Publisher: Kluwer Academic/Plenum Publishers.
AB Purpose. Relatively large (>5 .mu.m) and porous (mass d. < 0.4 g/cm3) particles present advantages for the delivery of drugs to the **lungs**, e.g., excellent aerosolization properties. The aim of this study was, first, to formulate such particles with excipients that are either FDA-approved for **inhalation** or endogenous to the **lungs**; and second, to compare the aerodynamic size and performance of the particles with theor. ests. based on bulk **powder** measurements. Methods. **Dry powders** were made of water-sol. excipients (e.g., lactose, albumin) combined with water-insol. material (e.g., **lung** surfactant), using a std. single-step spray-drying process. Aerosolization properties were assessed with a **Spinhaler** device in vitro in both an Andersen cascade impactor and an Aerosizer. Results. By properly choosing excipient concn. and varying the spray drying parameters, a high degree of control was achieved over the phys. properties of the **dry powders**. Mean geometric diams. ranged between 3 and 15 .mu.m, and tap densities between 0.04 and 0.6 g/cm3. Theor. ests. of mass mean aerodynamic diam. (MMAD) were rationalized and calcd. in terms of geometric particle diams. and bulk tap densities. Exptl. values of MMAD obtained from the Aerosizer most closely approximated the theor. ests., as compared to those obtained form the Andersen cascade impactor. Particles having high porosity and large size, with theor. ests. of MMAD between 1-3 .mu.m, exhibited emitted doses as high as 96% and **respirable** fractions ranging up to 49 or 92%, depending on measurement technique.
IT **2644-64-6**, DPPC
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(formulation and phys. characterization of large porous particles for **inhalation**)

L78 ANSWER 27 OF 80 HCAPLUS COPYRIGHT 2001 ACS
1999:647601 Document No. 132:141845 In vitro bactericidal evaluation of a low phase transition temperature liposomal **tobramycin** formulation as a **dry powder** preparation against gram-negative and gram-positive bacteria. Beaulac, C.; Sachetelli, S.; Lagace, J. (Department of Microbiology and Immunology Faculty of Medicine,

Universite de Montreal, Montreal, PQ, H3C 3J7, Can.). J. Liposome Res., 9(3), 301-312 (English) 1999. CODEN: JLREE7. ISSN: 0898-2104. Publisher: Marcel Dekker, Inc..

AB In previous studies, delivery of a liq. prepn. of encapsulated **tobramycin** in fluid liposomes, called Fluidosomes, has showed a marked improvement in the bactericidal activity against in-vitro and in-vivo extracellular infections. To examine the possibility of developing **aerosol** treatment using dehydrated Fluidosomes for the treatment of chronic **pulmonary** infections, freeze-dried prepns. of **tobramycin** and Fluidosomes were tested against cultures of Pseudomonas aeruginosa, Stenotrophomonas maltophilia, Burkholderia cepacia, Escherichia coli and Staphylococcus aureus. Bacterial colonies were enumerated 0, 1, 3, 6 and 16 h after the addn. of the antibiotic. Sixteen hours post-treatment, the growth of P. aeruginosa, S. maltophilia, B. cepacia and E. coli in the presence of sub-minimal inhibitory concns. of **tobramycin** was significantly lowered resp. by 17-, 40-, 47-, and 50-fold in comparison with growth in the presence of free antibiotic. No improvement was obsd. against S. aureus. Results obtained in this study suggest that the dehydrated form of liposomal antibiotic maintains the ability to increase penetration of the antibiotic in gram neg. bacterial cells; the development of aerosolization methods to administer dehydrated liposomes assocd. with high concns. of antibiotic could be a practical and efficient way of treating chronic **pulmonary** infections caused by resistant bacteria.

IT **32986-56-4, Tobramycin**
RL: BAC (Biological activity or effector, except adverse); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(bactericidal evaluation of low-phase transition temp. liposomal **tobramycin** formulation as **dry powder** against bacteria)

IT **2644-64-6**, DPPC **61361-72-6**, Dimyristoylphosphatidylglycerol
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(bactericidal evaluation of low-phase transition temp. liposomal **tobramycin** formulation as **dry powder** against bacteria)

L78 ANSWER 28 OF 80 HCAPLUS COPYRIGHT 2001 ACS
1999:576767 Document No. 131:189741 Fat emulsions for **inhalational** administration. Sonoke, Satoru; Seki, Junzo (Nippon Shinyaku Co., Ltd., Japan). PCT Int. Appl. WO 9944594 A1 19990910, 36 pp. DESIGNATED STATES: W: CA, CN, JP, KR, RU, US, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM; RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE. (Japanese). CODEN: PIXXD2. APPLICATION: WO 1999-JP1004 19990303. PRIORITY: JP 1998-53159 19980305.

AB Disclosed are prepns. for **inhalational** administration of drugs, esp. hardly water-sol. drugs. The prepns. are provided as optionally freeze-dried O/W fat emulsions, wherein fat emulsion particles contg. an oily component, an emulsifier and a drug as the essential ingredients are dispersed in water, wherein the fat emulsion particles have an av. particle diam. of 5-100 nm. By using an appropriate **inhalator**, **aerosol** particles capable of arriving at **pulmonary** alveoli can be easily formed from the **inhalants** and the particle diam. of the **aerosol** particles can be easily controlled. An emulsion was prepd. from **amphotericin** B 2, soybean lecithin 500, cholesteryloleate 300 mg, and water 10 mL for making an **inhalant**. After homogenization and filter sterilization, the av. particle size of the **inhalant** emulsion was 40.2 nm.

IT **1397-89-3, Amphotericin** B
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(fat emulsions contg. drugs and plant oil and phosphatides for **inhalational** administration)

L78 ANSWER 29 OF 80 HCAPLUS COPYRIGHT 2001 ACS
1999:511029 Document No. 131:149316 Pharmaceutical composition for

nasal administration of thiocolchicoside. Colombo, Paolo; Santi, Patrizia; Artusi, Mariella (Sanofi-Synthelabo, Fr.). PCT Int. Appl. WO 9939717 A1 19990812, 21 pp. DESIGNATED STATES: W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG. (French). CODEN: PIXXD2. APPLICATION: WO 1999-FR204 19990202. PRIORITY: FR 1998-1328 19980205.

AB A pharmaceutical compn. for **nasal** administration of thiocolchicoside (I), with immediate- or sustained-release is disclosed. An immediate-release **nasal** pharmaceutical **powder** contained I 2, and .beta.-cyclodextrin 18 g. Dissoln rate and in vivo absorption of I in rabbit's mucosa were studied.

L78 ANSWER 30 OF 80 HCAPLUS COPYRIGHT 2001 ACS

1999:425741 Document No. 131:63453 Compositions comprising cannabinoids. Watts, Peter James; Davis, Stanley Stewart (Danbiosyst UK Limited, UK). PCT Int. Appl. WO 9932107 A1 19990701, 24 pp. DESIGNATED STATES: W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG. (English). CODEN: PIXXD2. APPLICATION: WO 1998-GB3703 19981210. PRIORITY: GB 1997-26916 19971219.

AB There is provided a compn. for the **nasal** delivery of a cannabinoid which comprises a cannabinoid in a biphasic delivery system or a cannabinoid in a microsphere delivery system. Dronabinol was dissolved in sesame oil to give a concn. of 35 mg/mL. Water contg. a dispersed emulsifying agent, Lipoid E80, at 1.5 % was used as the continuous phase. The dronabinol-sesame oil mixt. was dispersed in the aq. phase to produce a coarse emulsion, which was homogenized to produce a fine emulsion of particles. The total oil content of the final emulsion was 20 % and delivered to the **nasal** cavity using a spray device.

L78 ANSWER 31 OF 80 HCAPLUS COPYRIGHT 2001 ACS

1999:375394 Document No. 131:23534 Improvements in phospholipid medicaments for asthma treatment. Hills, Brian Andrew; Woodcock, Derek Alan (Britannia Pharmaceuticals Limited, UK). PCT Int. Appl. WO 9927920 A2 19990610, 14 pp. DESIGNATED STATES: W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, HR, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG. (English). CODEN: PIXXD2. APPLICATION: WO 1998-GB3543 19981126. PRIORITY: GB 1997-25640 19971203; GB 1997-27276 19971224.

AB A method and app. is disclosed for treating asthma and other **respiratory** conditions. A medicament comprising a surface active phospholipid (SAPL) is prepd. in the form of a fine **powder** and administered to the **lungs** in a gas stream. A preferred SAPL is a solid blend of **dipalmitoyl phosphatidylcholine** (DPPC) and **phosphatidylglycerol** (PG).

IT **2644-64-6, Dipalmitoyl phosphatidylcholine**
RL: BAC (Biological activity or effector, except adverse); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(surface active phospholipid **aerosol powders** and dispenser for asthma treatment)

L78 ANSWER 32 OF 80 HCAPLUS COPYRIGHT 2001 ACS

1999:364517 Document No. 131:134549 Production and characterization of large

porous particles for **pulmonary** drug delivery. Batycky, Rick; Nice, Jackie; Chen, Donghao; Sung, Jean; Lipp, Mike; Mintzes, Jeff; Dunbar, Craig; Niven, Ralph; Edwards, David (Advanced Inhalation Research (AIR), Cambridge, MA, 02139, USA). Mater. Res. Soc. Symp. Proc., 550(Biomedical Materials--Drug Delivery, Implants and Tissue Engineering), 95-100 (English) 1999. CODEN: MRSPDH. ISSN: 0272-9172. Publisher: Materials Research Society.

AB Large porous particles were made for com. use by spray drying. Although of extremely rugose surface properties, the particles can be phys. characterized using a wide range of sizing equipment. A significant advantage of large porous particles, in addn. to the potential for long action, is that they tend to efficiently aerosolized from a simple **inhaler** device, without the use of carrier particles. The ability to avoid carrier particles in the formulation both allows omitting blending operations and permits the **inhalation** of relatively high drug doses.

IT **2644-64-6, Dipalmitoylphosphatidylcholine**
RL: PEP (Physical, engineering or chemical process); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(prodn. and characterization of large porous particles for **pulmonary** drug delivery)

L78 ANSWER 33 OF 80 HCAPLUS COPYRIGHT 2001 ACS

1999:233782 Document No. 130:272011 Stabilized dispersions containing fluorochemical suspension mediums as carriers for **pulmonary** delivery of bioactive agents, and methods of their use. Dellamary, Luis A.; **Tarara, Thomas E.**; Kabalnov, Alexey; **Weers, Jeffry G.**; Schutt, Ernest G. (Alliance Pharmaceutical Corp., USA). PCT Int. Appl. WO 9916421 A1 19990408, 56 pp. DESIGNATED STATES: W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, HR, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG. (English). CODEN: PIXXD2. APPLICATION: WO 1998-US20613 19980929. PRIORITY: US 1997-60337 19970929; US 1998-133848 19980814.

AB Stabilized dispersions are provided for the delivery of a bioactive agent. The dispersions preferably comprise a plurality of perforated microstructures dispersed in a suspension medium that typically comprises a liq. fluorochem. As d. variations between the suspended particles and suspension medium are minimized and attractive forces between microstructures are attenuated, the disclosed dispersions are particularly resistant to degrdn., such as by settling or flocculation. In particularly preferred embodiments the stabilized dispersions may be directly administered to the **lung** of a patient using an endotracheal tube or **bronchoscope**. A dispersion contg. perforated microstructure **powder** of ampicillin 20, hydroxyethyl starch 14.38, **dipalmitoylphosphatidylcholine** 65.2 % and perfluorohexane q.s., and deionized water q.s. was prepd., and administered (10 mg ampicillin) via liq. dose instillation (LDI) to pneumonia model rats. The local **lung** concn. of ampicillin were 250 times higher with LDI delivery as compared with the i.m. administration, and persisted for several days.

IT **816-94-4, Distearoylphosphatidylcholine**
2644-64-6, Dipalmitoylphosphatidylcholine
18656-38-7, Dimyristoyl phosphatidylcholine **64792-89-8,**
Dibehenoylphosphatidylcholine 68737-67-7
83061-18-1, Diarachidoylphosphatidylcholine
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(stabilized dispersions contg. perforated microstructure of bioactive agents and fluorochem. carriers and surfactants for **pulmonary** delivery of bioactive agents)

L78 ANSWER 34 OF 80 HCAPLUS COPYRIGHT 2001 ACS

1999:233780 Document No. 130:272009 Perforated microparticles and methods of

use. **Tarara, Thomas E.**; **Weers, Jeffry G.**; Kabalnov, Alexey; Schutt, Ernest G.; Dellamary, Luis A. (Alliance Pharmaceutical Corp., USA). PCT Int. Appl. WO 9916419-A1 19990408, 80 pp. DESIGNATED STATES: W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, HR, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG. (English). CODEN: PIXXD2. APPLICATION: WO 1998-US20602 19980929. PRIORITY: US 1997-60337 19970929.

AB Engineered particles are provided for the delivery of a bioactive agent to the **respiratory** tract of a patient. The particles may be used in the form of **dry powders** or in the form of stabilized dispersions comprising a nonaq. continuous phase. In particularly preferred embodiments the particles may be used in conjunction with an **inhalation** device such as a **dry powder inhaler**, metered dose **inhaler** or a **nebulizer**.

IT **2644-64-6, Dipalmitoylphosphatidylcholine**
4539-70-2, Distearoylphosphatidylcholine
64792-89-8, DiBehenoylphosphatidylcholine
68737-67-7 83061-18-1, DiArachidoylphosphatidylcholine
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(manuf. of perforated microparticles of bioactive agents for **pulmonary** delivery)

L78 ANSWER 35 OF 80 HCAPLUS COPYRIGHT 2001 ACS
1999:211213 Document No. 131:35805 Protein delivery by **inhalation** of large porous particles. Edwards, D. A.; Hrkach, J.; Schmitke, J.; Berkovitz, D.; Yancey, D.; Niven, R. (Advanced Inhalation Research, Inc., Cambridge, MA, 02139, USA). Polym. Prepr. (Am. Chem. Soc., Div. Polym. Chem.), 40(1), 328 (English) 1999. CODEN: ACPPAY. ISSN: 0032-3934. Publisher: American Chemical Society, Division of Polymer Chemistry.

AB Large porous particle formulations of protein drugs for **inhalation** were prepd. by spray drying with **dipalmitoylphosphatidylcholine** and exhibit shelf-life stability at room temp. up to 3 mo. The **powders** aerosolize effectively from a simple **inhaler** device and can delivery large quantities of protein in a single **inhalation** to the **lungs**.

IT **2644-64-6, Dipalmitoylphosphatidylcholine**
RL: BPR (Biological process); PEP (Physical, engineering or chemical process); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(protein delivery by **inhalation** of large porous particles)

L78 ANSWER 36 OF 80 HCAPLUS COPYRIGHT 2001 ACS
1999:126814 Document No. 130:158433 **Nasal** sprays containing amphiphilic agents to prolong the residence time in the **nasal** passage. Hatton, Anthony Guy; Hilton, Jane Elizabeth; Scott, Hugh; Tallon, Teresita Regina Geradine (SmithKline Beecham PLC, UK). PCT Int. Appl. WO 9907341 A1 19990218, 11 pp. DESIGNATED STATES: W: CA, JP, US; RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE. (English). CODEN: PIXXD2. APPLICATION: WO 1998-EP4972 19980805. PRIORITY: GB 1997-16805 19970809; GB 1998-6682 19980327.

AB New compns. adapted for **nasal** administration of medicaments are described. A sprayable compn. comprises (1) an amphiphilic agent that increases in viscosity on contact with water, (2) a nonaq. diluent for the amphiphilic agent, and (3) **powd.** medicament in suspension. A carrier for a **nasal** spray formulation was prepd. by forming a blend of 67 % fractionated coconut oil and 33 % monoolein. To this blend was added 0.2 % **powd.** lemon juice flavor, followed by 4 % micronized Ca mupirocin. When sprayed into the **nose** of a patient, the liq. coated the **nasal** passages and contacted with moisture inside, caused the carrier to thicken.

L78 ANSWER 37 OF 80 HCAPLUS COPYRIGHT 2001 ACS
1999:42582 Document No. 130:100677 Antiasthmatic pharmaceutical composition containing formoterol and rofleponide or their salts and derivatives. Axelsson, Bengt; Kallstrom, Leif; Trofast, Jan (Astra Aktiebolag (Publ), Swed.). PCT Int. Appl. WO 9900134 A1 19990107, 16 pp. DESIGNATED STATES: W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG. (English). CODEN: PIXXD2. APPLICATION: WO 1998-SE1089 19980608. PRIORITY: US 1997-883823 19970627.

AB A compn. or kit having as a first active ingredient formoterol (I), or a salt or solvate deriv. thereof, and having as a second active ingredient rofleponide (II), or a fatty acid ester thereof is disclosed. Also disclosed are methods for treating **respiratory** disorders using this compn. or kit. II palmitate 10, **dipalmitoylphosphatidylcholine** 63, dimyristoylphosphatidylcholine 24, sodium dipalmitoylphosphatidylglycerol 3, and racemic .alpha.-tocopherol 0.1 parts were dissolved in 1300 parts tertiary butanol and the soln. was freeze-dried to obtain a ***powder** which was micronized to particle size of less than 5.mu.m. I fumarate dihydrate 0.5 parts was mixed with 79.5 parts of lactose monohydrate and micronized. This micronized mixt. (80 parts) was added to the steroid/lipid freeze-dried **powder** (20 parts) and filled into a capsule for use in a **dry powder inhaler**.

L78 ANSWER 38 OF 80 HCAPLUS COPYRIGHT 2001 ACS
1999:34837 Document No. 130:100671 Proliposome **powders** for **inhalation** stabilized by tocopherol. Bystrom, Katarina; Nilsson, Per-Gunnar (Astra Aktiebolag (Publ), Swed.). PCT Int. Appl. WO 9900111 A1 19990107, 20 pp. DESIGNATED STATES: W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG. (English). CODEN: PIXXD2. APPLICATION: WO 1998-SE1090 19980608. PRIORITY: US 1997-884419 19970627.

AB A proliposome **powder** comprises discrete particles each contg. in a single phase a drug, a stabilizing proportion of tocopherol, and a lipid or mixt. of lipids having a phase transition temp. of below 37.degree.. Thus, rofleponide palmitate 10, DPPC, DMPC, dipalmitoylphosphatidylglycero l sodium salt 3, and racemic .alpha.-tocopherol 0.1 parts were dissolved in 1300 parts tert-BuOH and the soln. cooled to -35.degree.. The solvent was removed by sublimation by using the freeze-dryer and the temp. during the process was kept at .ltoreq.-10.degree.. The **powder** obtained after freeze-drying was micronized and mixed with .alpha.-lactose monohydrate. This formulation was more stable than the conventional formulation.

IT **2644-64-6**, DPPC **4537-77-3**, Dipalmitoylphosphatidylglycer ol **4539-70-2**, **Distearoylphosphatidylcholine 18656-38-7**, DMPC **61361-72-6**, Dimyristoylphosphatidylglycerol **68737-67-7**, Dioleoylphosphatidylcholine
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(proliposome **powders** for **inhalation** stabilized by tocopherol)

L78 ANSWER 39 OF 80 HCAPLUS COPYRIGHT 2001 ACS
1998:719127 Document No. 129:335792 **Powder inhalants** containing insulin and an absorption enhancer. Backstrom, Kjell Goran Erik; Dahlback, Carl Magnus Olof; Edman, Peter; Johansson, Ann Charlotte

Birgit (Astra Aktiebolag, Swed.). U.S. US 5830853 A 19981103, 17 pp. Cont.-in-part of U.S. 5,506,203. (English). CODEN: USXXAM. APPLICATION: US 1996-582702 19960104. PRIORITY: US 1994-265371 19940623.

AB A method of treating a patient in need of insulin treatment, includes the steps of introducing into the lower **respiratory** tract of the patient an effective amt. of a therapeutic prepn. in the form of a **dry powder** contg. (a) insulin and (b) an enhancer compd. which enhances the absorption of insulin in the **lungs** of the patient. The enhancer of the invention is preferably a surfactant, such as a salt of a fatty acid, a bile salt, or a phospholipid. The enhancer may be, for example, a sodium, potassium, or org. amine (e.g., lysine) salt of the fatty acid, and the fatty acid is preferably capric acid or another fatty acid of 8-16 carbon atoms. The preferred fatty acid salt is sodium caprate. The ratio of insulin to enhancer will preferably vary from about 9:1 to about 1:1.

L78 ANSWER 40 OF 80 HCAPLUS COPYRIGHT 2001 ACS

1998:672588 Document No. 129:293894 Zinc free insulin crystals for use in **pulmonary** compositions. Havelund, Svend (Novo Nordisk A/S, Den.). PCT Int. Appl. WO 9842749 A1 19981001, 20 pp. DESIGNATED STATES: W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG. (English). CODEN: PIXXD2. APPLICATION: WO 1998-DK109 19980320. PRIORITY: DK 1997-317 19970320.

AB Zinc-free insulin crystals having a diam. below 10 .mu.m suitable for **pulmonary** administration are disclosed. The crystals have a reduced tendency to assoc. into aggregates in the **dry powder**. Human (10 mg) and 5 mg sodium taurocholate were dissolved in 500 .mu.L 10 mM tris buffer (pH 8.0) in 20% EtOH in water. To this soln. was added 500 .mu.L 2M sodium acetate. Uniformly sized crystals (0.5-1 .mu.m) of the hormone were obtained.

L78 ANSWER 41 OF 80 HCAPLUS COPYRIGHT 2001 ACS

1998:672483 Document No. 129:281022 Method for preparation of a therapeutic **powder** through coprecipitation of insulin and absorption enhancer. Jensen, Steen; Hansen, Philip (Novo Nordisk A/S, Den.). PCT Int. Appl. WO 9842367 A1 19981001, 15 pp. DESIGNATED STATES: W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG. (English). CODEN: PIXXD2. APPLICATION: WO 1998-DK107 19980320. PRIORITY: DK 1997-318 19970320.

AB A process for the prepn. of a therapeutic **powder** formulation comprising particles composed of insulin or an analog or deriv. thereof and an enhancer which enhances the absorption of insulin in the lower **respiratory** tract is provided. The obtainable **powder** formulation of insulin and enhancer has a better stability profile than **powders** of essentially the same compn. prepd. by spray drying, freeze-drying, vacuum drying and open drying. A compn. was prepd. from insulin, ZnCl2, and sodium taurocholate.

L78 ANSWER 42 OF 80 HCAPLUS COPYRIGHT 2001 ACS

1998:621076 Document No. 129:265462 **Dry powder** formulations of polynucleotide complexes for **inhalation** delivery to the **respiratory** tract. Szoka, Francis C., Jr.; Rolland, Alain; Wang, Jinkang (Regents of the University of California, USA). U.S. US 5811406 A 19980922, 31 pp., Cont.-in-part of U.S. Ser. No. 482,110. (English). CODEN: USXXAM. APPLICATION: US 1995-482254 19950609. PRIORITY: US 1995-482110 19950607; US 1995-485430 19950607.

AB Polynucleotide complexes are stabilized by adding a cryoprotectant compd. and lyophilizing the resulting formulation. The lyophilized formulations are milled or sieved into a **dry powder** formulation which may be used to deliver the polynucleotide complex. Delivery of the polynucleotide to a desired cell tissue is accomplished by contacting the tissue with the **powder** to rehydrate it. In a preferred embodiment, a **dry powder** formulation is used to transfer genetic information to the cells of the **respiratory** tract.

IT **2462-63-7D**, Dope, polynucleotide complexes **4235-95-4D**, Dopc, polynucleotide complexes
RL: PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(**dry powder** formulations of polynucleotide complexes for **inhalation** delivery to the **respiratory** tract)

L78 ANSWER 43 OF 80 HCAPLUS COPYRIGHT 2001 ACS
1998:568724 Document No. 129:193729 Pharmaceutical compositions for the treatment of infant **respiratory** distress syndrome or adult **respiratory** distress syndrome containing 3-(cyclopropylmethoxy)-n-(3,5-dichloro-4-pyridinyl)-4-(difluoromethoxy)benzamide and a **lung** surfactant. Germann, Paul-Georg; Kilian, Ulrich; Beume, Rolf; Amschler, Hermann; Kruger, Uwe; Hafner, Dietrich; Eistetter, Klaus (Byk Gulden Lomberg Chemische Fabrik G.m.b.H., Germany). PCT Int. Appl. WO 9835683 A1 19980820, 13 pp. DESIGNATED STATES: W: AL, AU, BA, BG, BR, CA, CN, CZ, EE, GE, HU, ID, IL, JP, KR, LT, LV, MK, MX, NO, NZ, PL, RO, SG, SI, SK, TR, UA, US, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM; RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE. (English). CODEN: PIXXD2. APPLICATION: WO 1998-EP847 19980214. PRIORITY: DE 1997-19705924 19970217.

AB Novel compns. for the treatment of infant **respiratory** distress syndrome(IRDS) and adult **respiratory** distress syndrome (ARDS) are indicated which contain N-(3,5-dichloropyrid-4-yl)-3-cyclopropylmethoxy-4-difluoromethoxy benzamide (I) and/or its pharmacol. tolerable salts and **lung** surfactant. A combination of 600 .mu.g/kg I and 25 mg/kg **lung** surfactant improved the PaO2 values in rats as compared with the resp. **lung** surfactant alone. Thus, 8.2 g of 1,2-dipalmitoyl-3-sn-phosphatidylcholine, 3.46 g of 1-palmitoyl-2-oleoyl-3-sn-phosphatidylglycerolammonium, 2.7 g of I, 0.56 g of palmitic acid, 0.3 g of calcium chloride, and 0.2 g of r-SP-C (FF/I) were dissolved in 700 mL of 2-propanol/water (90:10) and spray-dried to obtain a fine, cream-colored **powder**.

IT **63-89-8**, 1,2-Dipalmitoyl-sn-phosphatidylcholine **26853-31-6**
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(pharmaceutical compns. for treatment of infant **respiratory** distress syndrome or adult **respiratory** distress syndrome contg. 3-(cyclopropylmethoxy)-n-(3,5-dichloro-4-pyridinyl)-4-(difluoromethoxy)benzamide and **lung** surfactant)

L78 ANSWER 44 OF 80 HCAPLUS COPYRIGHT 2001 ACS
1997:780583 Document No. 128:196620 **Intranasal** absorption of granulocyte-colony stimulating factor (G-CSF) from **powder** formulations, in sheep. Gill, I. J.; Fisher, A. N.; Farraj, N.; Pitt, C. G.; Davis, S. S.; Illum, L. (Highfields Science Park, Danbiosyst UK Ltd, Albert Einstein Centre, Nottingham, NG7 2TN, UK). Eur. J. Pharm. Sci., 6(1), 1-10 (English) 1998. CODEN: EPSCED. ISSN: 0928-0987. Publisher: Elsevier Science Ireland Ltd..

AB Granulocyte-colony stimulating factor (G-CSF) was administered to sheep in three different **nasal** formulations and as a s.c. injection. The **nasal** formulations were: a soln. contg. L-.alpha.-lysophosphatidylglycerol (LPG), a **powder** formulation comprising small starch microspheres (SSMS) and a **powder** formulation comprising SSMS and LPG. Absorption of G-CSF was assessed directly by quantitation in plasma and indirectly by measurement of the pharmacodynamic response in terms of leukocyte and neutrophil counts.

After the **nasal** delivery of the G-CSF **powder** formulation contg. SSMS and LPG the absorption of G-CSF was significantly higher (P<0.01) than that from the simple **nasal** soln. or the **powder** without the enhancer, but the resulting pharmacol. response was not significantly different. The bioavailability of G-CSF from the **powder** formulation contg. SSMS and LPG relative to the s.c. injection was 8.4 (.+-.3.4). The authors also found that at the resp. G-CSF doses investigated, the pharmacodynamic response of this **nasal** formulation, was similar to that obtained after the s.c. administration. The study indicates that the **powder** formulation contg. enhancers could offer an alternative delivery route for G-CSF in the form of **intranasal** administration.

L78 ANSWER 45 OF 80 HCAPLUS COPYRIGHT 2001 ACS
1997:557634 Document No. 127:225295 Pharmaceutical compositions for treating eustachian tube dysfunction by **inhalation**. Nemechek, Andrew J. (Administrators of the Tulane Educational Fund, USA). PCT Int. Appl. WO 9729738 A1 19970821, 25 pp. DESIGNATED STATES: W: CA, JP. (English). CODEN: PIXXD2. APPLICATION: WO 1996-US2294 19960220. PRIORITY: US 1996-603000 19960216.

AB Pharmaceutical compns. treating eustachian tube dysfunction using surfactants. In particular, it relates to the delivery of surfactants by **inhalation** to the eustachian tube to reduce its opening pressure. The surfactant compns. suitable for use in the invention are obtained from natural sources or produced synthetically. Bovine **pulmonary** surfactant is one example that is com. available. The surfactant compns. are delivered by **inhalation** via the **nasal** and/or oral cavities as a liq. **aerosol** or in a **dry powder** formulation. A wide variety of uses is encompassed by the present invention including, but not limited to, the treatment of otol. disorders assocd. with eustachian tube dysfunction such as otitis media and dysfunction that results from acute changes in altitude. Otitis media with effusion was induced in gerbils by introduction of heat-killed Streptococcus pneumoniae suspension into the middle ear. The animals were treated by 2.5 mL **nebulized** Survanta (bovine **pulmonary** surfactant) 3 time/day for 5 days, then were sacrificed. The surfactant treatment of affected animals by **nebulization** reduced the opening pressure of eustachian tube to a level similar to the ears of normal unaffected animals.

IT **2644-64-6, Dipalmitoylphosphatidylcholine**
RL: BAC (Biological activity or effector, except adverse); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(pharmaceutical compns. for treating eustachian tube dysfunction by **inhalation**)

L78 ANSWER 46 OF 80 HCAPLUS COPYRIGHT 2001 ACS
1997:543577 Document No. 127:140578 **Powdered pulmonary** surfactant manufacture. Eistetter, Klaus (Byk Gulden Lomberg Chemische Fabrik Gmbh, Germany). Ger. Offen. DE 19602332 A1 19970731, 3 pp. (German). CODEN: GWXXBX. APPLICATION: DE 1996-19602332 19960124.

AB A stable **powd. pulmonary** surfactant prepn. is manufd. from an org. soln. or suspension contg. **pulmonary** surfactant protein by spray drying. Thus, a soln. of 1,2-dipalmitoyl-3-sn-phosphatidylcholine 7.0, 1-palmitoyl-2-oleoyl-3-sn-**phosphatidylglycerol** Na salt 2.5, CaCl2.2H2O 205, and palmitic acid 250 mg in EtOH-H2O (85:15) 300 mL was mixed with a soln. of **pulmonary** surfactant protein SP-C (429 mg/L) in CHCl3-MeOH (9:1) 350 mL, and the mixt. was spray dried in air with inlet temp. 90.degree. and outlet temp. 52-54.degree. to produce a loose **powder**.

L78 ANSWER 47 OF 80 HCAPLUS COPYRIGHT 2001 ACS
1997:463472 Document No. 127:99679 Porous **dry-powder** PLGA microspheres coated with **lung** surfactant for systemic insulin delivery via the **lung**. Hanes, J.; Evora, C.E.; Ben-Jebria, A.; Edwards, D.A.; Langer, R. (Department of Chemical Engineering, Massachusetts Institute of Technology, Cambridge, MA, 02139,

USA). Proc. Int. Symp. Controlled Release Bioact. Mater., 24th, 57-58 (English) 1997. CODEN: PCRMEY. ISSN: 1022-0178. Publisher: Controlled Release Society, Inc..

AB Large, **dipalmitoylphosphatidylcholine** (DPPC)-coated poly(lactic-glycolic acid) (PLGA) microspheres of low mass d. provide a viable method to achieve high **respirable** fractions of **inhaled dry powder aerosols**. The demonstrated controlled delivery of active insulin over a period of days is a vast improvement over the best previous insulin **aerosol** results.

IT **63-89-8, Dipalmitoylphosphatidylcholine**
RL: BPR (Biological process); PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(porous **dry-powder** PLGA microspheres coated with **lung** surfactant for systemic insulin delivery via the **lung**)

L78 ANSWER 48 OF 80 HCAPLUS COPYRIGHT 2001 ACS
1997:145224 Document No. 126:148480 **Dry powder** formulations of polynucleotide complexes prepared using cryoprotectants and lyophilization, lipid preparation, and use for gene therapy. Szoka, Francis C., Jr.; Rolland, Alain; Wang, Jinkang (Regents of the University of California, USA). PCT Int. Appl. WO 9641873 A1 19961227, 46 pp. DESIGNATED STATES: W: AL, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, NL, PT, SE. (English). CODEN: PIXXD2. APPLICATION: WO 1996-US7867 19960528. PRIORITY: US 1995-482254 19950609.

AB Polynucleotide complexes are stabilized by adding a cryoprotectant compd. and lyophilizing the resulting formulation. The lyophilized formulations are milled or sieved into a **dry powder** formulation which may be used to deliver the polynucleotide complex. Cationic lipid complexes are esp. useful in forming polynucleotide complexes to be cryoprotected and lyophilized. Several cationic lipids are synthesized and characterized. Delivery of the polynucleotide to a desired cell tissue is accomplished by contacting the tissue with the **powder** to rehydrate it. In a preferred embodiment, a **dry powder** formulation is used to induce genetic modification of a patient's **lung** tissue.

IT **2462-63-7**, Dioleoylphosphatidylethanolamine
RL: BPR (Biological process); PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(for gene delivery; **dry powder** formulations of polynucleotide complexes prepd. using cryoprotectants and lyophilization, lipid prepn., and use for gene therapy)

L78 ANSWER 49 OF 80 HCAPLUS COPYRIGHT 2001 ACS
1996:728984 Document No. 125:339082 Process for the preparation of **respirable** particles. Jakupovic, Edib; Trofast, Jan (Astra Aktiebolag, Swed.). PCT Int. Appl. WO 9632095 A1 19961017, 17 pp. DESIGNATED STATES: W: AL, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, NL, PT, SE. (English). CODEN: PIXXD2. APPLICATION: WO 1996-SE479 19960412. PRIORITY: SE 1995-1384 19950413.

AB A process for producing a pharmaceutical **powder** for **inhalation** comprising cryst. particles of an **inhalation** compd., comprising dissolving an **inhalation** compd. in a solvent; and introducing the soln. contg. the **inhalation** compd. in droplet form or as a jet stream, into an anti-solvent which is miscible with the solvent and which is under agitation.

IT **65154-06-5**, Platelet activating factor

RL: BSU (Biological study, unclassified); BIOL (Biological study)
(antagonists; prepn. of **respirable** particles)
IT **51333-22-3**, Budesonide
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(prepn. of **respirable** particles)

L78 ANSWER 50 OF 80 HCAPLUS COPYRIGHT 2001 ACS
1996:716261 Document No. 125:339046 **Powdered** pharmaceutical **inhalants** having improved dispersibility. Eljamal, Mohammed; Patton, John S.; Foster, Linda; Platz, Robert M. (Inhale Therapeutic Systems, USA). PCT Int. Appl. WO 9632096 A1 19961017, 50 pp. DESIGNATED STATES: W: AL, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, NL, PT, SE. (English). CODEN: PIXXD2. APPLICATION: WO 1996-US5265 19960415. PRIORITY: US 1995-423568 19950414.
AB Dispersibility of a **respirable powder**, administrable by **inhalation**, is increased by including a pharmaceutically acceptable water-sol. polypeptide such as serum albumin. A cationic lipid comprising dioleoylphosphatidylethanolamine:(N-[1-(2,3-dioleyloxy)propyl]-N,N,N-trimethylammonium chloride) (1:1) was mixed with mannitol and human serum albumin (HSA) to give a concn. of 0.35:6.4:0.91 mg/mL (lipid:mannitol:HSA), the soln. was then spray dried. The dispersibility of the **powder** was 59% while the control soln. contg. no HSA was not dispersible.
IT **2462-63-7**
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(**powd.** pharmaceutical **inhalants** having improved dispersibility)

L78 ANSWER 51 OF 80 HCAPLUS COPYRIGHT 2001 ACS
1996:580276 Document No. 125:230802 Liposomes containing a corticosteroid. Taylor, Peter William; Maas, Janet Catherine (Ciba-Geigy A.-G., Switz.). PCT Int. Appl. WO 9622764 A1 19960801, 18 pp. DESIGNATED STATES: W: AL, AM, AU, AZ, BB, BG, BR, BY, CA, CN, CZ, EE, FI, GE, HU, IS, JP, KG, KP, KR, KZ, LK, LR, LS, LT, LV, MD, MG, MK, MN, MX, NO, NZ, PL, RO, RU, SG, SI, SK, TJ, TM, TR, TT, UA, US, UZ, VN, AZ, BY, KG; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, DE, DK, ES, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG. (English). CODEN: PIXXD2. APPLICATION: WO 1996-GB83 19960117. PRIORITY: GB 1995-1286 19950124.
AB Pharmaceutical liposomes or dehydrated liposomes, esp. for use in the treatment of asthma by **inhalation** therapy, comprise 9.alpha.-chloro-6.alpha.-fluoro-11.beta.-hydroxy-16.alpha.-methyl-3-oxo-17.alpha.-propionyloxyandrosta-1,4-diene-17.beta.-carboxylate (I) and .gtoreq.1 synthetic phospholipids. 1-N-hexadecanoyl-2-(9-cis-octadecenoyl)-3-sn-phosphatidylcholine 700 mg and Na 1,2-di(9-cis-octadecenoyl)-3-sn-**phosphatidylserine** 300 mg were dissolved in tert-BuOH and the obtained soln. was mixed with I 100 mg dissolved in 5 mL tert-BuOH. The resulting soln. was added dropwise to 200 mL phosphate-buffered saline soln. The aq. liposome suspension was dialyzed against PBS and concd. to 20 mL, filtered, and dispensed into vials for administration by **nebulizer**.
IT **2644-64-6, Dipalmitoyl phosphatidylcholine**
4539-70-2, Distearoyl phosphatidylcholine
10015-85-7, Dioleoyl phosphatidylcholine **13699-48-4**, Dimyristoyl phosphatidylcholine **26853-31-6**
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(liposomes contg. corticosteroid for treatment of asthma by **inhalation**)

L78 ANSWER 52 OF 80 HCAPLUS COPYRIGHT 2001 ACS
1996:483650 Document No. 125:123753 Proliposome **powders** for **inhalation**. Bystroem, Katarina; Nilsson, Per-Gunnar (Astra Aktiebolag, Swed.). PCT Int. Appl. WO 9619199 A1 19960627, 24 pp. DESIGNATED STATES: W: AL, AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE,

DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, DE, DK, ES, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG. (English). CODEN: PIXXD2. APPLICATION: WO 1995-SE1560 19951220. PRIORITY: SE 1994-4466 19941222; SE 1995-2369 19950630.

AB A proliposome **powder** comprises discrete particles of a biol. active component in a single phase together with a lipid or mixt. of lipids having a phase transition temp. of below 37.degree.. Rofleponide palmitate 10, **dipalmitoyl phosphatidylcholine** 63, dimyristoyl phosphatidylcholine 24, and Na dipalmitoyl **phosphatidylglycerol** 3 parts were dissolved in 1300 parts tert-BuOH at 80.degree. and the soln. was freeze-dried. The obtained **powder** was micronized to a particle size <5 .mu.m and mixed with lactose.cntdot.H2O . The mixt. was homogenized, agglomerated, and filled into a **dry powder inhaler**.

IT **2644-64-6, Dipalmitoylphosphatidylcholine**
4537-77-3, Dipalmitoylphosphatidylglycerol **4539-70-2, Distearoylphosphatidylcholine 10015-85-7**, Dioleoylphosphatidylcholine **13699-48-4**, Dimyristoylphosphatidylcholine **61361-72-6**, Dimyristoylphosphatidylglycerol
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(proliposome **powders** for **inhalation**)

L78 ANSWER 53 OF 80 HCAPLUS COPYRIGHT 2001 ACS
1996:476916 Document No. 125:123763 **Powder** formulations containing melezitose as a diluent. Baeckstroem, Kjell; Johansson, Ann; Linden, Helena (Astra Aktiebolag, Swed.). PCT Int. Appl. WO 9619207 A1 19960627, 21 pp. DESIGNATED STATES: W: AL, AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, DE, DK, ES, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG. (English). CODEN: PIXXD2. APPLICATION: WO 1995-SE1541 19951219. PRIORITY: SE 1994-4468 19941222.

AB A **powder** formulation for the administration of medically useful polypeptides, comprises the polypeptides with melezitose as diluent. For example, 12 parts insulin was dissolved in distd. water and 4 parts Na taurocholate (absorption enhancer) was added. Melezitose 84 parts was added to the above mixt. and pH was adjusted to 7.4. The soln. was concd. by evapn. of the water and the obtained solid cake was crushed, sieved, and micronized in a jet mill. The micronized **powder** was agglomerated and filled into a **dry powder inhaler**.

IT **9002-64-6, Parathyroid hormone**
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(**powder** formulations contg. biol. active polypeptides and absorption enhancers and melezitose diluent)

L78 ANSWER 54 OF 80 HCAPLUS COPYRIGHT 2001 ACS
1996:381612 Document No. 125:95802 Aerosolization and hygroscopic growth evaluation of lyophilized liposome **aerosols** under controlled temperature and relative humidity conditions. Johnson, D. L.; Wenger, E. N.; Polikandritou-Lambros, M. (Dep. Occupational Environmental Health, Coll. Public Health, Oklahoma City, OK, 73190, USA). Aerosol Sci. Technol., 25(1), 22-30 (English) 1996. CODEN: ASTYDQ. ISSN: 0278-6826.

AB An exptl. app. was developed that aerosolized lyophilized liposome **powders** over extended periods under well-controlled and selectable conditions of temp. and relative humidity (RH). Four types of Multilamellar Large Vesicle liposomes (dilauroylphosphatidylcholine [DLPC], dimyristoylphosphatidylcholine [DMPC], **dipalmitoylphosphatidylcholine** [DPPC], and **distearoylphosphatidylcholine** [DSPC]) were lyophilized (freeze dried) for study in the system as a first step in their evaluation as drug carrier candidates for **inhalation** therapy applications.

Conditions of 25.degree.C temp. and 13-100% RH were used. **Aerosol** Mass Median Aerodynamic Diams. (MMADs) were measured using a time-of-flight aerodynamic particle sizer. The formulations exhibited different handling and hygroscopic growth characteristics. DLPC and DMPC were difficult to manipulate and aerosolize under all conditions; in contrast, DPPC and DSPC were easily manipulated and readily aerosolized. MMADs at the lowest RH used (13%-15%) ranged from 1.31 .mu.m (DPPC) to 1.54 .mu.m (DLPC). All formulations exhibited hygroscopic growth of RH 75% or higher. Growth ratios, i.e. the ratio of MMAD at a given RH to MMAD at the lowest RH used, were max. at 95-100% RH and were: DMPC 1.67, DLPC 1.27, DSPC 1.23, and DPPC 1.15. Max. MMADs occurred at 95%-100% RH and ranged from 1.51 .mu.m (DPPC) to 2.2 .mu.m (DMPC), still well within the **respirable** range. Hygroscopic growth was not clearly demonstrated below 55% RH. These results demonstrated that (1) the exptl. app. was an effective tool for aerodynamic study of lyophilized liposome **powders**, (2) lyophilized liposomes may have practical application as **dry powder** pharmaceutical **aerosols**, (3) hygroscopic growth may have little influence on **aerosol** particle size and **respiratory** tract deposition, regardless of formulation, and (4) DSPC and DPPC appear more attractive than DMPC and DLPC for future study.

IT **2644-64-6, Dipalmitoylphosphatidylcholine**
4539-70-2, Distearoylphosphatidylcholine
13699-48-4, Dimyristoylphosphatidylcholine
RL: PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(aerosolization and hygroscopic growth evaluation of lyophilized liposome **aerosols** under controlled temp. and relative humidity conditions)

L78 ANSWER 55 OF 80 HCAPLUS COPYRIGHT 2001 ACS
1996:275058 Document No. 124:325385 Systemic administration of a therapeutic preparation containing insulin. Baeckstroem, Kjell G. E.; Dahlbaeck, Carl M. O.; Edman, Peter; Johansson, Ann C. B. (Ab Astra, Swed.). U.S. US 5506203 A 19960409, 15 pp. (English). CODEN: USXXAM. APPLICATION: US 1994-265371 19940623. PRIORITY: SE 1993-2198 19930624; SE 1994-372 19940204.

AB A method of treating a patient in need of insulin treatment, includes the steps of introducing into the lower **respiratory** tract of the patient an effective amt. of a therapeutic prepn. in the form of a **dry powder** contg. (a) insulin and (b) an enhancer compd. which enhances the absorption of insulin in the **lungs** of the patient. A **powder** mixt. contg. Na caprate and insulin at the ratio of 25:75 was administered to rats by **inhalation** and the blood glucose levels of the rats were subsequently monitored.

L78 ANSWER 56 OF 80 HCAPLUS COPYRIGHT 2001 ACS
1996:135969 Document No. 124:185620 A method for treating capsules used for drug storage. **Clark, Andrew R.**; Gonda, Igor (Genentech, Inc., USA). PCT Int. Appl. WO 9601105 A1 19960118, 20 pp. DESIGNATED STATES: W: CA, JP, MX; RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE. (English). CODEN: PIXXD2. APPLICATION: WO 1995-US8310 19950629. PRIORITY: US 1994-270195 19940701.

AB Capsules (such as hard gelatin, cellulose and plastic capsules) contg. pharmaceutical **powders** which are administered to a patient via **inhalation** are treated so as to increase the effective amt. of the pharmaceutical agent reaching the **respiratory** system of the patient. The capsules are coated internally with a lubricant during manuf. and in one aspect, the method involves exposing the lubricant-coated inner surface of the capsule to a pharmaceutically acceptable solvent which dissolves the lubricant. Generally, the solvent is volatile, and bactericidal (e.g. ethanol). The pharmaceutical **powder** is inserted in the capsule following this washing procedure. Alternatively, the lubricant-coated capsule is dusted internally with a dusting agent such as a salt (e.g. sodium chloride) or a sugar (e.g. lactose, mannitol, trehalose or sucrose) prior to inserting

the pharmaceutical **powder** inside the capsule. The invention also pertains to a capsule, optionally contg. the pharmaceutical **powder** therein, which has been treated according to the methods discussed above.

L78 ANSWER 57 OF 80 HCAPLUS COPYRIGHT 2001 ACS
1996:127781 Document No. 124:211683 The influence of sodium glycocholate and other additives on the in vivo transfection of plasmid DNA in the **lungs**. Freeman, Daniel J.; Niven, Ralph W. (Amgen Inc., Thousand Oaks, CA, 91320, USA). Pharm. Res., 13(2), 202-9 (English) 1996. CODEN: PHREEB. ISSN: 0724-8741.

AB A plasmid contg. the luciferase 'marker' cDNA was constructed to test non viral gene delivery formulations in vivo. A scale up procedure was devised to produce up to gram quantities of plasmid. Sufficient quantities were generated to process and test the DNA with various additives and to generate a spray-dried **powder** formulation of the plasmid. Male Sprague-Dawley rats (250 g) were intratracheally instilled with 200-250 .mu.l of soln. contg. 200 .mu.g plasmid .+-. lipid [DC Chol:DOPE 1:1 M (2 mg/kg)], growth factors [KGF (10 mg/kg), EGF (5 mg/kg)], permeation enhancers [sodium glycocholate (NaGC) (0.01 to 10% w/v), sodium deoxycholate (1% w/v), .beta.-cyclodextrin (1% w/v)], surfactant [Tween 80 (1% w/v)], a mucolytic [N-acetylcysteine (10% w/v)] and pos. charged synthetic polymers [PVAVAM 6 and 14%]. Animals were sacrificed 24 h post-dose and the **lungs** were assayed for luciferase using a chemiluminescent assay. The relative ability of the materials to promote luciferase prodn. in the **lungs** was permeation enhancer >> DNA alone .gtoreq. lipid, mucolytic, surfactant, growth factor > polymer. Protein prodn. in the **lungs** ranged from 10 times below the DNA control (.apprxeq.16 pg) using the polymers (.apprxeq.1.5 pg) to .apprxeq.125 times greater than the control using the permeation enhancer (.apprxeq.2050 pg). The transfection capabilities of the majority of additives was low. The enhancing effects of sodium glycocholate were dose-dependent and perhaps assocd. with the crit. micelle concn. Although the bile salt was the most successful of the tested compds., it resulted in significant mortality when used at concns. greater than 1% w/v. The results suggest that transfection can be significantly enhanced by additives such as NaGC but some toxicity may be unavoidable.

IT **2462-63-7**, Dioleoyl **phosphatidylethanolamine**
RL: MOA (Modifier or additive use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(effects of sodium glycocholate and other additives on transfection of plasmid DNA in **lung**)

L78 ANSWER 58 OF 80 HCAPLUS COPYRIGHT 2001 ACS
1995:364336 Document No. 122:115026 Therapeutic preparation for **inhalation** of insulin. Baeckstroem, Kjell Goeran Erik; Dahlbaeck, Carl Magnus Olof; Edman, Peter; Johansson, Ann Charlotte Birgit (Astra AB, Swed.). PCT Int. Appl. WO 9500127 A1 19950105, 41 pp. DESIGNATED STATES: W: AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, ES, FI, GB, GE, HU, JP, KE, KG, KP, KR, KZ, LK, LU, LV, MD, MG, MN, MW, NL, NO, NZ, PL, PT, RO, RU, SD, SE, SI, SK, TJ, TT, UA, UZ, VN; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, DE, DK, ES, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG. (English). CODEN: PIXXD2. APPLICATION: WO 1994-SE633 19940623. PRIORITY: SE 1993-2198 19930624; SE 1994-370 19940204.

AB A therapeutic prepn. for **inhalation** in the form of a **powder** comprises insulin and a substance which enhances the absorption of insulin in the lower **respiratory** tract. The absorption enhancers include anionic surfactants such as bile salts, phospholipids, alkyl glucosides, fatty acid salts, and cyclodextrins. For example, insulin dissolved in water was mixed with Na caprate and lactose to produce a **powder** largely consisting of particles with a diam. of .apprx.2 .mu.m. The prepn. so obtained was administered to dogs and plasma insulin levels were detd. at various times after administration.

L78 ANSWER 59 OF 80 HCAPLUS COPYRIGHT 2001 ACS
1995:362581 Document No. 122:115021 **Inhalation** pharmaceuticals containing polypeptides.. Baeckstroem, Kjell Goeran Erik; Dahlbaeck, Carl Magnus Olof; Edman, Peter; Johansson, Ann Charlotte Birgit (Astra AB, Swed.). PCT Int. Appl. WO 9500128 A1 19950105, 32 pp. DESIGNATED STATES: W: AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, ES, FI, GB, GE, HU, JP, KE, KG, KP, KR, KZ, LK, LU, LV, MD, MG, MN, MW, NL, NO, NZ, PL, PT, RO, RU, SD, SE, SI, SK, TJ, TT, UA, UZ, VN; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, DE, DK, ES, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG. (English). CODEN: PIXXD2. APPLICATION: WO 1994-SE634 19940623. PRIORITY: SE 1993-2198 19930624; SE 1994-371 19940204.
AB Pharmaceutical **inhalation** compns. contain a mixt. of a polypeptide and an enhancer which enhances the systemic absorption of the polypeptide in the **lung** of a patient. The mixt. is a **dry powder**, in which at least 50% of the total wt. of polypeptide and enhancer consists of primary particles having a diam. .ltoreq.10 .mu., the primary particles optionally being formed into agglomerates. Thus, a formulation was prepd. contg. human insulin (53 g) and sodium caprate (170 g). A dramatic improvement in the bioavailability of insulin was obsd.

L78 ANSWER 60 OF 80 HCAPLUS COPYRIGHT 2001 ACS
1995:358919 Document No. 122:115014 Liposome **powders** for pharmaceutical compositions. Schreier, Hans (Advanced Therapies, Inc., USA). PCT Int. Appl. WO 9428876 A1 19941222, 17 pp. DESIGNATED STATES: W: CA, JP; RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE. (English). CODEN: PIXXD2. APPLICATION: WO 1994-US6137 19940531. PRIORITY: US 1993-73234 19930607.
AB A procedure for producing **dry** liposome **powders** (to improve their stability) which can be formulated into a variety of pharmaceutical compns. involves micronizing lyophilized liposome cakes with a jet mill or other devices to generate **dry powders** with a diam. of 1-100 .mu.m. Nine grams soya phosphatidylcholine (115 mM) were dispersed in 100 mL aq. soln. contg. 8.6 g lactose (345 mM). Liposomes were extruded through a polycarbonate membrane and lyophilized. The lyophilized cake was scraped into a jet mill and the mill operated under N so as to minimize potential oxidn. and absorption of water. Liposomes were milled for 3 min at a inlet pressure of 40 psig. A majority of the mass introduced into the jet mill was collected in the cyclone of the mill representing a particle size of 5-10 .mu.m diam. These **powders** could be introduced into capsules or used as **powder inhalants**.

L78 ANSWER 61 OF 80 HCAPLUS COPYRIGHT 2001 ACS
1994:586957 Document No. 121:186957 Electrophoretic Mobility of Salbutamol Drug **Powder** in Mixed Propellant Solvents. Sandstrom, Kenneth B.; Eriksson, Patrik M.; Rosenholm, Jarl B. (Department of Physical Chemistry, Aabo Akademi University, Turku, SF-20500, Finland). J. Pharm. Sci., 83(10), 1380-5 (English) 1994. CODEN: JPMSAE. ISSN: 0022-3549.
AB The influence of lipids on the dispersion properties of micronized Salbutamol base drug in liq. fluorocarbons was characterized by electrophoretic mobility measurements and by particle size measurements. A modified Malvern ps26 microelectrophoretic cell was employed, allowing pressurized samples to be analyzed. The measurements were carried out at 25.degree. in 100:0, 50:50, 40:60, and 30:70 blends of trichlorofluoromethane (P11) and dichlorodifluoromethane (P12) as a function of oleic acid concn. A limited no. of measurements were also done with soybean lecithin or synthetic **dipalmitoylphosphatidylcholin e** (DPPC). A solvent series based on the polarizability (.alpha.) and on the dipole moment (.mu.) of the solvent mols. is constructed in order to est. the acid-base character of the propellants. The type and the amt. of lipids and also the type of fluorocarbon mixt. plays an important role in the formation of surface charge. The dispersion stability with respect to the measured particle size does not always correlate with the measured electrophoretic mobility, and hence, the surface charge cannot alone

explain the dispersion stability. Instead, the wettability of the **powders** seems to be important as well. Pos. surface charge is obtained with the oleic acid or with synthetic DPPC but neg. surface charge exists with soybean lecithin.

IT **2644-64-6, Dipalmitoylphosphatidylcholine**
RL: MSC (Miscellaneous)
(salbutamol electrophoretic mobility in mixed propellant solvents in relation to)

L78 ANSWER 62 OF 80 HCAPLUS COPYRIGHT 2001 ACS
1994:417938 Document No. 121:17938 Formulation and in vitro performance of liposome **powder aerosols**. Schreier, H.; Mobley, W.C.; Concessio, N.; Hickey, A.J.; Niven, R.W. (Progress Cent., Univ. Florida, Alachua, FL, USA). S.T.P. Pharma Sci., 4(1), 38-44 (English) 1994. CODEN: STSSE5. ISSN: 1157-1489.

AB The formulation of lyophilized liposome cakes, micronization of the cake, aerosolization using a **dry powder inhaler**, and the in vitro distribution of such **powders** upon aerosolization in a silicone elastomer throat attached to an Andersen cascade impactor are reported. Two liposome compns. consisting of phosphatidylcholine/**phosphatidylglycerol** and phosphatidylcholine/cholesterol were examd. Fluorescent marker mols., 5,6-carboxyfluorescein and N,N'-bis(1-hexylheptyl)-3,4:9,10-perylenebis(dicarboximide), were used to monitor directly the distribution of liposomal lipid upon aerosolization. Milled micronized liposome **powders** can be effectively aerosolized at a fixed flow rate. The de-aggregation and dispersion of the liposome **powder** is not significantly improved by the addn. of spray-dried lactose used as carrier **powder**.

L78 ANSWER 63 OF 80 HCAPLUS COPYRIGHT 2001 ACS
1994:69238 Document No. 120:69238 Effects of isoenzyme-selective inhibitors of cyclic nucleotide phosphodiesterase on microvascular leak in guinea pig **airways** in vivo. Raeburn, David; Karlsson, Jan Anders (Dagenham Res. Cent., Rhone-Poulenc Rorer Ltd., Dagenham/Essex, RM10 7XS, UK). J. Pharmacol. Exp. Ther., 267(3), 1147-52 (English) 1993. CODEN: JPETAB. ISSN: 0022-3565.

AB The effects of drugs elevating cyclic nucleotide concns. or inhibiting cyclic nucleotide phosphodiesterase (PDE) activity on platelet activating factor (PAF)-induced microvascular leak (MVL) was examd. in the anesthetized guinea pig. Drugs were dosed as **dry powders** directly into the tracheobronchial tree and MVL was assessed by using the fluorescent macromol. fluorescein isothiocyanate-dextran (FITC-dextran, 150 kD). Basal FITC-dextran content was 15 .+-. 1 and 23 .+-. 4 ng .cntdot. mg-1 of tracheal and **bronchial** tissue, resp., and 0.6 .+-. 0.03 .mu.g .cntdot. mL-1 of tracheobronchial lavage fluid. PAF (2-8 nmol, intratracheal (i.t.) administration) produced a dose-dependent increase in MVL; the max. increase being 100% in tracheal and **bronchial** tissue and 400% in lavage fluid. PAF (16 nmol) produced acute **bronchospasm**. The beta-2 adrenoceptor agonist salbutamol (50 or 200 .mu.g i.t.) and the nitrovasodilator sodium nitroprusside (200 or 500 .mu.g i.t.), which activate adenylyl and guanylyl cyclases, resp., potently and significantly ($P < .05$) inhibited PAF-induced MVL in **airway** tissues and in the **airway** lumen by 60 to 100%. Sodium nitroprusside (50 .mu.g i.t.) only significantly inhibited MVL into the lavage fluid. Inhibition of PDE type IV with rolipram (200 .mu.g i.t.) or PDE type V with zaprinast (200 .mu.g i.t.) potently (by 70-100%) and significantly ($P < .05$) reduced MVL into the **airways**. Lower doses (20 .mu.g) were without effect. Neither vinpocetine (PDE type I inhibitor) nor siguazodan (PDE type III inhibitor) inhibited MVL. Theophylline (200 .mu.g i.t.) inhibited MVL into lower **airway** tissues and lavage fluid but was without marked effect in tracheal tissues. These findings suggest that stimulation of adenylyl and guanylyl cyclase or inhibition of cyclic nucleotide PDE in postcapillary venular endothelial cells prevents PAF-induced MVL. The effectiveness of rolipram and zaprinast indicate the

importance of PDE types IV and V in regulating plasma protein extravasation in guinea pig **airways** in vivo.

IT **65154-06-5**, Platelet-activating factor
RL: BIOL (Biological study)
(**lung** microvascular leak induction by, isoenzyme-selective inhibitors of cyclic nucleotide phosphodiesterase effect on)

L78 ANSWER 64 OF 80 HCAPLUS COPYRIGHT 2001 ACS
1993:219864 Document No. 118:219864 Method of administering a surfactant dispersion to the **lung**. Davis, Craig William; Snyder, Rodney Gary (Wellcome Foundation Ltd., UK). Eur. Pat. Appl. EP 533410 A1 19930324, 20 pp. DESIGNATED STATES: R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE. (English). CODEN: EPXXDW. APPLICATION: EP 1992-308285 19920911. PRIORITY: GB 1991-20005 19910919.

AB A method of administering a surfactant formulation to the **lungs** of a patient characterized in that a dispersion of **dipalmitoylphosphatidylcholine** (DPPC) in an aq. carrier in an amt. 10-90 mg/mL is heated to 25-90.degree. prior to **nebulizing** and delivery of **respirable** surfactant particles to the **lungs** of a patient with **respiratory** distress. Thus, 25 mL water was added to a vial contg. DPPC **powder** 2.025, hexadecanol 225, tyloxapol 150, and NaCl 876.6 mg and vigorously mixed to obtain a suspension. The suspension was placed in a **nebulizer** and dild. with 125 mL water to obtain a formulation with an osmolality of 190 mOsm/L and 13.5mg DPPC/mL. The **nebulization** of DPPC at various temps. using different parameters were investigated.

IT **2644-64-6, Dipalmitoylphosphatidylcholine**
RL: BIOL (Biological study)
(dispersion contg., for **respiratory** distress treatment)

L78 ANSWER 65 OF 80 HCAPLUS COPYRIGHT 2001 ACS
1992:620140 Document No. 117:220140 Composition comprising a peptide for **nasal** administration. Hoelgaard, Annie Rassing; Dath, Brigitte Smedemark; Mindeholm, Linda (Novo Nordisk A/S, Den.). PCT Int. Appl. WO 9216196 A1 19921001, 38 pp. DESIGNATED STATES: W: AU, BG, BR, CA, CS, FI, HU, JP, KP, KR, NO, PL, RO, RU, US; RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LU, MC, NL, SE. (English). CODEN: PIXXD2. APPLICATION: WO 1992-DK84 19920318. PRIORITY: DK 1991-497 19910320.

AB **Powder** compns. for **intranasal** administration of a peptide contain a lower alkyl ether of cellulose, a cyclodextrin or deriv., and a phospholipid. A **nasal powder** was prepd. contg. B-human growth hormone 2.05, didecanoylphosphatidylcholine 1.6, .alpha.-cyclodextrin 4.0, Methocel E4M 12.4, glycine 0.1, and citric acid 0.2 mg.

L78 ANSWER 66 OF 80 HCAPLUS COPYRIGHT 2001 ACS
1992:67231 Document No. 116:67231 Direct spray-dried drug/lipid liposome **powder** composition. Durrani, Manzer; Fitch, Wendy; Fok, Katherine; Radhakrishnan, Ramachandran; Uster, Paul S. (Liposome Technology, Inc., USA). PCT Int. Appl. WO 9116882 A1 19911114, 51 pp. DESIGNATED STATES: W: AU, CA, JP; RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LU, NL, SE. (English). CODEN: PIXXD2. APPLICATION: WO 1991-US3092 19910506. PRIORITY: US 1990-520792 19900508.

AB A process for prepn. of pharmaceutical liposomes comprises direct spray-drying of a soln. of lipids and water-sol. drug to generate a bulk **powder** as an alternative to the drying of preformed liposomes. The lipids are dissolved in a solvent and the water-sol. drug is dissolved in aq. solvent, the two solns. are combined to form a ppt.-free soln. which is then spray-dried to generate the bulk **powder**. Upon rehydration the **powder** spontaneously forms liposomes having a high drug encapsulation efficiency of approx. 70%. The direct spray-dried **powder** is particularly useful for drug administration by **inhalation**. Thus, partially hydrogenated egg phosphatidylcholine, cholesterol, egg **phosphatidylglycerol**, and .alpha.-tocopherol at the mol ratio of 55:40:5:0.1 and albuterol sulfate (I) at the ratio of 1:2.6 to total lipids were dissolved in a mixt. of water, EtOH, and

Freon-11 at the ratio of 14.3:80:5.7 vol./vol. The soln. was spray-dried at a final concn. of 3.5% total solids in soln. The **powder** contained total lipids 680 and I 275 mg/g. The **bronchodilator** and cardiovascular effects of the above spray-dried **powder** were tested with guinea pigs.

IT **32986-56-4, Tobramycin**
RL: BIOL (Biological study)
(pharmaceutical spray-dried **inhalant** liposomes contg.)

L78 ANSWER 67 OF 80 HCAPLUS COPYRIGHT 2001 ACS
1991:478945 Document No. 115:78945 Therapeutic agents for **nasal** administration to the brain. Frey, William, H., III (Ramsey Foundation, USA). PCT Int. Appl. WO 9107947 A1 19910613, 43 pp. DESIGNATED STATES: W: AT, AU, BB, BG, BR, CA, CH, DE, DK, ES, FI, GB, HU, JP, KP, KR, LK, LU, MC, MG, MW, NL, NO, RO, SD, SE, SU; RW: AT, BE, BF, BJ, CF, CG, CH, CM, DE, DK, ES, FR, GA, GB, GR, IT, LU, ML, MR, NL, SE, SN, TD, TG. (English). CODEN: PIXXD2. APPLICATION: WO 1990-US7099 19901204. PRIORITY: US 1989-446308 19891205; US 1990-568746 19900817.

AB Pharmaceutical compns. contain a neurol. therapeutic agent for administering to the **nasal** cavity of a mammal for delivery to the brain. The agent is absorbed through the **nasal** mucosa and transported by means of the olfactory neural pathway to the brain. A **nasal** liposome contained nerve growth factor 3 nM and **phosphatidylserine** 300 .mu.M.

L78 ANSWER 68 OF 80 HCAPLUS COPYRIGHT 2001 ACS
1990:125195 Document No. 112:125195 Polyene macrolide pre-liposomal **powders**. Mehta, Reeta; Lopez-Berestein, Gabriel (University of Texas System, USA). PCT Int. Appl. WO 8903208 A1 19890420, 27 pp. DESIGNATED STATES: W: AT, AU, BB, BG, BR, CH, DE, DK, FI, GB, HU, JP, KP, KR, LK, LU, MC, MG, MW, NL; RW: AT, BE, BJ, CF, CG, CH, CM, DE, FR, GA, GB, IT, LU, ML, MR, NL, SE, SN, TD, TG. (English). CODEN: PIXXD2. APPLICATION: WO 1988-US3652 19881017. PRIORITY: US 1987-109813 19871016.

AB A fine **powder** which forms antifungal polyene macrolide-contg. liposomes upon suspension in an aq. soln. is produced by: (1) dissolving the macrolide in an org. solvent and a phospholipid in another org. solvent; (2) mixing the resultant 2 solns.; (3) removing the solvents from the mixt. to give a residue; (4) dissolving the residue in an org. solvent; (5) extg. this solvent to leave a remnant; (6) dissolving this remnant in Me3COH; (7) passing this soln. through a filter; and (8) lyophilizing the filtrate. A soln. of nystatin in MeOH was mixed with a soln. of dimyristoylphosphatidylcholine (DMPC) and dimyristoylphosphatidylglycerol (DMPG) in CHCl3. The DMPC:DMPG ratio was 7:3 and the nystatin:DMPC + DMPG ratio was 1:10. The solvents were evapd. at 40.degree. under partial vacuum to give a dried lipid film. This film was dissolved in 30 mL Me3COH-CH2Cl2 mixt. (2:1) and the solvents evapd. at 40.degree. under partial vacuum to form a lipid residue, which was dissolved in Me3COH and the soln. passed through a 0.2 .mu.m filter. The filtrate was frozen and lyophilized to give a fine preliposomal **powder**. This **powder** (100 mg contg. 10 mg nystatin) was suspended with 10 mL pyrogen-free saline and upon heating at 40.degree. for 2-5 min produced liposomes. The encapsulating efficiency of the liposomes was >99%.

IT **1397-89-3, Amphotericin** B
RL: BIOL (Biological study)
(preliposomal **powders** contg.)

IT **13699-48-4**, Dimyristoylphosphatidylcholine **61361-72-6**, Dimyristoylphosphatidylglycerol
RL: BIOL (Biological study)
(preliposomal **powders** contg. polyene macrolide fungicides and)

L78 ANSWER 69 OF 80 HCAPLUS COPYRIGHT 2001 ACS
1989:639540 Document No. 111:239540 Liposomes containing hydrophilic drugs and a process for manufacture them. Profitt, Richard Thomas; Adler-Moore, Jill; Chiang, Su-Ming (Vestar, Inc., USA). Eur. Pat. Appl. EP 317120 A1

19890524, 13 pp. DESIGNATED STATES: R: AT, BE, CH, DE, ES, FR, GB, GR, IT, LI, LU, NL, SE. (English). CODEN: EPXXDW. APPLICATION: EP 1988-310278 19881101. PRIORITY: US 1987-119518 19871112.

AB A novel liposome compn. and a method for solubilizing amphiphilic drugs in a small amt. of org. solvent for use in improved liposomes are described. A **phosphatidylglycerol** is acidified and the amphiphilic drugs suspended in an org. solvent are added to solubilize the drugs. Distearoylphosphatidylglycerol Na soln. dissolved in CHCl3-MeOH mixt. (1:1) was acidified with HCl and then mixed with **amphotericin** B (I) soln. dissolved in the same solvent. Hydrogenated egg phosphatidylcholine soln. and cholesterol soln. dissolved in the same solvent were then mixed with the mixt. The pH was adjusted to 4.5 by addn. of 2.5 N NaOH. The molar ratio of I, distearoylphosphatidylglycerol, hydrogenated egg phosphatidylcholine, and cholesterol in the soln. was 0.4, 0.4, 2.0, and 1.0 resp. The lipid soln. was spray-dried to give a **powder**, which was hydrated with 9% lactose-contg. 10 mM succinate buffer (pH 5.62) and sonicated to give liposomes. Mice were i.v. inoculated with Candida albicans and 3 days post-infection, mice were treated with a single dose of either free I or liposomal I. There was no dose level of free I which produced any survivors at 29 days post-infection; however, all animals treated with 10 or 15 mg/kg of liposomal I were still alive 42 days post-infection.

IT **2644-64-6, Dipalmitoylphosphatidylcholine**
4539-70-2, Distearoylphosphatidylcholine
61361-72-6, Dimyristoylphosphatidylglycerol
RL: BIOL (Biological study)
(liposomes contg. **amphotericin** B and)

IT **1397-89-3, Amphotericin** B
RL: BIOL (Biological study)
(liposomes contg., manuf. of)

L78 ANSWER 70 OF 80 HCAPLUS COPYRIGHT 2001 ACS

1989:502760 Document No. 111:102760 Spray-dried mixtures of liposomal components for formation of liposomes upon reconstitution. Payne, Nicholas I.; Salmon, J. Roger (Squibb, E. R., and Sons, Inc., USA). U.S. US 4830858 A 19890516, 6 pp. (English). CODEN: USXXAM. APPLICATION: US 1985-699981 19850211.

AB A method for prepg. a spray-dried mixt. of liposomal components which may be stored dry and reconstituted to form liposomes comprises the formation of a soln. of liposomal components in a suitable org. solvent contg. 1-25% by wt. liposome-forming lipid, optionally 1 or 2 active agents, and optionally at least 1 adjuvant which imparts advantageous properties to the final liposome, adding an aq. soln. or suspension of .gtoreq.1 water-sol. carrier materials which are suitable for i.v. injection but which are substantially insol. in said org. solvent, and spray-drying the mixt. to give a dry mixt. of liposomal components. The wt. ratio of liposomal components to carrier material is 0.03:1-5:1. Sorbitol (25 g) was dissolved in H2O (50 mL) and added to MeOH (750 mL) contg. dimyristoylphosphatidylcholine (4.235 g), dimyristoylphosphatidylglycerol (1.815 g) and **amphotericin** B (0.378 g). The soln. was spray-dried in a spray-dry app. with an inlet temp. of 27.degree., outlet 20.degree., and air throughput 500 L/h. The resulting **powder** was packaged and stored; water (10 mL) was added to this **powder** (i.e. liposome precursor) (0.629 g) to give liposomes. This method of prepn. of liposomes results in the partial incorporation of water-sol. biol. active compds.; unencapsulated materials may be removed or encapsulated and unencapsulated material may be administered together (no data).

IT **2644-64-6, Dipalmitoylphosphatidylcholine**
4539-70-2, Distearoylphosphatidylcholine
10015-85-7
RL: BIOL (Biological study)
(pharmaceutical liposome precursor **powders** contg. water-sol. carriers and)

IT **13699-48-4,** Dimyristoylphosphatidylcholine
RL: BIOL (Biological study)

(pharmaceutical liposome precursor **powders** contg. water-sol. particulate carriers and)

IT **1397-89-3, Amphotericin** B **61361-72-6,** Dimyristoylphosphatidylglycerol
RL: BIOL (Biological study)
(pharmaceutical liposome precursor **powders** contg. water-sol. particulate carriers and lipids and)

L78 ANSWER 71 OF 80 HCAPLUS COPYRIGHT 2001 ACS
1989:428593 Document No. 111:28593 **Dipalmitoylphosphatidylcholine** -containing **lung** surfactant compositions. Clements, John A. (University of California, Berkeley, USA). U.S. US 4826821 A 19890502, 7 pp. Cont. of U.S. Ser. No. 794,122, abandoned. (English). CODEN: USXXAM. APPLICATION: US 1986-927340 19861105. PRIORITY: US 1983-542453 19831017; US 1985-749122 19850626.

AB A synthetic **lung** surfactant consists of **dipalmitoylphosphatidylcholine**, a C14-18 fatty alc., preferably hexadecanol, and a nontoxic nonionic surface active agent, preferably tyloxapol. The surfactant is prepd. in a **powd.** lyophilized form that can be stored for extended periods at room temp. The **powd.** product can be readily reconstituted by adding water. A mixt. of 810 mg **dipalmitoylphosphatidylcholine**, 90 mg hexadecanol and 60 mL tyloxapol saline soln. (250 mg tyloxapol in 250 mL 0.1N NaCl) was lyophilized into a **powder**. In prematurely delivered rabbit and lamb fetuses, a surfactant reconstituted from the above **powder** compensated for the **lung** deficits. The surfactant-treated fetuses required less pressure to ventilate, had higher **lung** compliance, and higher **lung** vols. than the controls.

IT **2644-64-6, Dipalmitoylphosphatidylcholine**
RL: BIOL (Biological study)
(**lung** surfactant contg., for treatment of mammalian **respiratory** distress syndrome)

L78 ANSWER 72 OF 80 HCAPLUS COPYRIGHT 2001 ACS
1989:199200 Document No. 110:199200 Aminoglycoside phosphates and method of preparation of liposomes containing aminoglycoside salts. Bally, Marcel B.; Bolcsak, Lois E.; Cullis, Pieter R.; Janoff, Andrew S.; Mayer, Lawrence D.; Lenk, Robert P.; Jedrusiak, Jo Ann (Liposome Co., Inc., USA). PCT Int. Appl. WO 8804573 A1 19880630, 50 pp. DESIGNATED STATES: W: AU, BG, DK, FI, HU, JP, KR, NO; RW: AT, BE, CH, DE, FR, GB, IT, LU, NL, SE. (English). CODEN: PIXXD2. APPLICATION: WO 1987-US77 19870113. PRIORITY: US 1986-946391 19861223; US 1986-946398 19861223.

AB Aminoglycoside salts, esp. the phosphate salts, are encapsulated in liposomes for treatment of disease, esp. gram-neg. pneumonia. An aq. soln. of 0.5 g gentamicin sulfate (I) in 9 mL 0.9% saline was added to 1 g egg phosphatidylcholine (EPC) in 50 mL CH_2Cl_2, and the resulting mixt. was agitated under reduced pressure at 40.degree. until the sample was dried to a **powder**. The sample was rehydrated with 9 mL water and 41 mL 0.9% saline, the mixt. was stirred at 40.degree., and the mixt. was stabilized at 4.degree. for 1 day. The mixt. was dialyzed for 2 days against 0.9% saline to remove all I which was not assocd. with liposomes. This method resulted in liposomes contg. 36.1 mg I/100 mg EPC, compared to 11.5 mg I/100 mg EPC for liposomes which were not dried to a **powder**, and which were centrifuged to remove unassocd. I.

IT **32986-56-4, Tobramycin 49842-07-1, Tobramycin** sulfate **112050-64-3, Tobramycin** phosphate
RL: BIOL (Biological study)
(liposomes contg.)

L78 ANSWER 73 OF 80 HCAPLUS COPYRIGHT 2001 ACS
1989:13580 Document No. 110:13580 Formation of dry liposomes and their administration as **aerosols**. Axelsson, Bengt Ingemar; Bystroem, Ulla Katarina; Dahlbaeck, Carl Magnus Olof; Kaellstroem, Leif Arne; Nilsson, Per Gunnar; Trofast, Jan William (Draco AB, Swed.). Eur. Pat. Appl. EP 260241 A1 19880316, 12 pp. DESIGNATED STATES: R: ES, GR.

(English). CODEN: EPXXDW. APPLICATION: EP 1987-850273 19870908. PRIORITY: SE 1986-3812 19860912.

AB A system for administration of liposomes comprises a dry lipid-based solid material, which spontaneously forms or reconstitutes liposomes in an aq. medium, i.e., in vivo; the system also comprises a device for aerosolizing selected quantities of the dry liposomes. The system is esp. used for **inhalation** of drugs e.g. antiasthmatics. **Dipalmitoyl phosphatidylcholine** 7.22 and flumethasone 21-palmitate 0.38 were dissolved in tert-BuOH 76 g under gentle heating; the soln. was frozen and lyophilized and the resulting **powder** was dispersed in aq. 3.3% lactose (432 g soln.). The liposome dispersion was spray-dried to give a **powder** suitable for **inhalation** therapy (<3 .mu.m); 2.8 g of the lyophilized micronized **powder** was dispersed in 434 g chilled 65:35 propellant 114 - propellant 115 mixt., and the blend was filled into Al containers and sealed with 50 .mu.L valves. Rats given Sephadex beads by intratracheal instillation were exposed to the **aerosol** daily for 3 consecutive days. Rats treated with different doses from the pressurized dose-**aerosols** showed a significant dose-response relationship; the high dose level (doses not given) inhibited the development of **lung** edema and the animals showed the same **lung** wt. as normal untreated controls. Controls implanted with Sephadex and treated with placebo pressurized dose-**aerosols** lacking the spray-dried **powder** developed **pulmonary** edema.

IT **51333-22-3**, Budesonide **51333-22-3D**, Budesonide, 21-fatty acid ester
RL: BIOL (Biological study)
(delivery of, to **lungs**, using dry liposomes)

IT **2644-64-6**, **Dipalmitoyl phosphatidylcholine** **13699-48-4**, Dimyristoyl phosphatidylcholine
RL: BIOL (Biological study)
(dry liposomes contg., for drug deliver to **lungs**)

L78 ANSWER 74 OF 80 HCAPLUS COPYRIGHT 2001 ACS

1988:118997 Document No. 108:118997 Compositions of liposomes and beta-2-receptor active substances, for administration to the **respiratory** tract. Axelsson, Bengt Ingemar; Bystroem, Ulla Katarina; Dahlbaeck, Carl Magnus Olof; Kaellstroem, Leif Arne; Nilsson, Per Gunnar; Trofast, Jan William (Draco AB, Swed.). PCT Int. Appl. WO 8705803 A1 19871008, 29 pp. DESIGNATED STATES: W: AT, AU, BB, BG, BR, CH, DE, DK, FI, GB, HU, JP, KP, KR, LK, LU, MC, MG, MW, NL, NO, RO, SD, SE, SU; RW: AT, BE, BJ, CF, CG, CH, CM, DE, FR, GA, GB, IT, LU, ML, MR, NL, SE, SN, TD, TG. (English). CODEN: PIXXD2. APPLICATION: WO 1987-SE148 19870323. PRIORITY: SE 1986-1457 19860401.

AB A pharmaceutical compn. consists of a **dry powder** comprising liposomes and a .beta.2-receptor-active substance, the latter being preferably entrapped within the liposomes or portioned between the liposomes and an external phase. This compn. is for administration to the **respiratory** trait, preferably by **inhalation**. **Dipalmitoyl phosphatidylcholine** 60 and cholesterol 60 mg dissolved in 10 g CHCl3 and 60 mg terbutaline sulfate dissolved in 1 mL H2O were emulsified, evapd. on a rotary evaporator to form a gel, and 3 g H2O added to the gel with mixing to form a liposome dispersion in which 38% of the terbutaline sulfate was encapsulated. Liposomes contg. terbutaline sulfate were also tested for antiinflammatory and **bronchospasmolytic** effects (in rats and guinea pigs, resp.), with pos. results.

IT **2644-64-6**, **Dipalmitoyl phosphatidylcholine** **4539-70-2** **13699-48-4**
RL: BIOL (Biological study)
(liposomal **powd.** compns. contg. beta-receptor-active substances and)

L78 ANSWER 75 OF 80 HCAPLUS COPYRIGHT 2001 ACS

1988:118968 Document No. 108:118968 Liposomes containing **amphotericin** B and carbohydrates and cholesterol, and a method for

their preparation and size stabilization after extrusion. Abra, Robert; Szoka, Francis C. (Liposome Technology, Inc., USA). PCT Int. Appl. WO 8701933 A1 19870409, 34 pp. DESIGNATED STATES: W: JP; RW: AT, BE, CH, DE, FR, GB, IT, LU, NL, SE. (English). CODEN: PIXXD2. APPLICATION: WO 1986-US1881 19860911. PRIORITY: US 1985-781395 19850927.

AB Liposomes contg. .gtoreq.1 mol% **amphotericin** B (I) have a select size distribution in a range <1 .mu. after an extended storage period; they are prepd. from a suspension of liposomes of heterogeneous size contg. .gtoreq.1 mol% I in the lipid phase and in the aq. phase .gtoreq.0.5% wt./vol. a membrane stabilizing agent, the liposomes are sized to achieve a select size distribution, and the suspension is lyophilized. The size distribution achieved by extrusion is preserved during storage. Heterogeneous size liposomes were prepd. from a mixt. contg. egg phosphatidylcholine, egg **phosphatidylglycerol**, cholesterol, .alpha.-tocopherol in a 49.7:5.5:44.2:0.6 wt. ratio, and 5 mol% I; **dry powd**. lactose was added to the liposome suspension to give 5 mol% lactose and the resulting multilamellar vesicles were readily hydrated. The liposomes were 1st extruded through a 0.4 .mu. and then through a 0.2 .mu. membrane to give liposomes of an av. 250 nm pore size before and 221 nm after lyophilization and rehydration. Liposomes prepd. from the above lipid mixt. and 7 mol% I increased in size 2-3 fold over a 35 day storage period.

IT **4537-77-3 13699-48-4**, Dimyristoyl phosphatidylcholine
61361-72-6, Dimyristoyl **phosphatidylglycerol**
RL: BIOL (Biological study)
(liposomes contg. **amphotericin** B and)

IT **1397-89-3**, **Amphotericin** B
RL: BIOL (Biological study)
(liposomes contg., storage-stable, size stabilization in relation to)

L78 ANSWER 76 OF 80 HCAPLUS COPYRIGHT 2001 ACS

1985:67398 Document No. 102:67398 Liposomes. Groom, Cheryl Vanessa; Timmins, Peter (Squibb, E. R., and Sons, Inc. , USA). Brit. UK Pat. Appl. GB 2134869 A1 19840822, 6 pp. (English). CODEN: BAXXDU. APPLICATION: GB 1983-4165 19830215.

AB A stable liposome precursor in the form of a thin film of liposome components coated on a water-sol. particulate carrier material is prepd. by forming a soln. of .gtoreq.1 liposome-forming lipid, optionally, .gtoreq.1 biol. active compd., and, optionally, .gtoreq.1 adjuvant and coating the particulate water-sol. carrier with the so-formed soln. to form a thin film of liposomal components on the carrier material. Phys. stability problems of liposome dispersions on storage are overcome by forming the aq. dispersion of coated **powd**. carrier prior to administration. Egg lecithin 2.0, ergosterol [57-87-4] (adjuvant) 0.5 g and **amphotericin** B [**1397-89-3**] 50.0 mg were dissolved in MeOH 10 mL. Lactose [63-42-3] 13.0 g was placed in a 250-mL round bottom flask and the above soln. added in 2-mL portions. The solvent was removed after each addn. to give lactose particles coated with lipid material. The coated carrier may be packaged and stored in vials and H2O added with heating to give a liposomal dispersion.

IT **1397-89-3**
RL: BIOL (Biological study)
(liposomes contg.)

L78 ANSWER 77 OF 80 HCAPLUS COPYRIGHT 2001 ACS

1984:563491 Document No. 101:163491 Introductory remarks about artificial **lung** expanding compounds (ALEC). Bangham, A. D.; Miller, N. G. A.; Davies, R. J.; Greenough, A.; Morley, C. J. (Cambridge, UK). Colloids Surf., 10, 337-41 (English) 1984. CODEN: COSUD3. ISSN: 0166-6622.

AB Following a discussion on the properties of **lung** surfactants and on the development of ALEC's, preliminary clin. results with a **dry** , protein-free **powder** consisting of **dipalmitoylphosphatidylcholine** [**2644-64-6**] and **phosphatidylglycerols** (7:3 mol/mol mixt.) in 27-29-wk-old babies are presented.

IT **2644-64-6**

RL: BIOL (Biological study)
(artificial **lung** surfactant contg., human newborn treatment with)

L78 ANSWER 78 OF 80 HCAPLUS COPYRIGHT 2001 ACS
1984:144999 Document No. 100:144999 Phospholipid **lung** surfactant. Roentgen-Odenthal, Renate; Duerr, Manfred; Harhausen, Ekkehard (Nattermann, A., und Cie. G.m.b.H., Fed. Rep. Ger.). Ger. Offen. DE 3229179 A1 19840209, 8 pp. (German). CODEN: GWXXBX. APPLICATION: DE 1982-3229179 19820805.

AB A **powder** for prepn. of dispersions for treatment of newborn **respiratory** distress syndrome contains **dipalmitoylphosphatidylcholine** [**2644-64-6**] 40-45, dipalmitoylphosphatidylglycerol [**4537-77-3**] 5-10, and a sugar 50% by wt. Thus, 45 mg **dipalmitoylphosphatidylcholine** and 5 mg dipalmitoylphosphatidylglycerol were sep. dissolved in HOAc, the clear, warm solns. were combined, mixed with 50 mg glucose [50-99-7], placed in ampuls, and lyophilized. The **powder** was dispersed in 1 mL Tris-phosphate buffer for intrapulmonary or intratracheal administration.

IT **4537-77-3**
RL: BIOL (Biological study)
(dispersible **powders** contg. **dipalmitoylphosphatidylcholine** and glucose and, for **respiratory** distress syndrome treatment)

IT **2644-64-6**
RL: BIOL (Biological study)
(dispersible **powders** contg. dipalmitoylphosphatidylglycerol and glucose and, for **respiratory** distress syndrome treatment)

L78 ANSWER 79 OF 80 HCAPLUS COPYRIGHT 2001 ACS
1984:39635 Document No. 100:39635 Preparation of **pulmonary** surfactants. (Teijin Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 58183621 A2 19831026 Showa, 5 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1982-66350 19820422.

AB **Powders** contg. **pulmonary** surfactants (dipalmitoyllecithins, phospholipids, proteins, etc.) are prepd. for the treatment of **respiratory** disorders. Thus, 1.2 g L-.alpha.-**dipalmitoylphosphatidylcholine** [**63-89-8**] and 0.8 g dilinolein were dissolved in CHCl3 and dried under reduced pressure. The product (0.5 g) was dissolved in 50 mL CHCl3, mixed with 5 g glycine, dried under reduced pressure, and pulverized. The effective surface activity of the product was demonstrated.

IT **63-89-8**
RL: BIOL (Biological study)
(for **respiratory** disorder treatment)

L78 ANSWER 80 OF 80 HCAPLUS COPYRIGHT 2001 ACS
1982:460932 Document No. 97:60932 Path dependence of adsorption behavior of mixtures containing **dipalmitoylphosphatidylcholine**. Notter, R. H.; Smith, Sheryl; Taubold, R. D.; Finkelstein, J. N. (Dep. Pediatr., Univ. Rochester, Rochester, NY, USA). Pediatr. Res., 16(7), 515-19 (English) 1982. CODEN: PEREBL. ISSN: 0031-3998.

AB The adsorption of aq. phospholipid dispersions contg. **dipalmitoylphosphatidylcholine** (DPPC) [**2644-64-6**] is investigated at 35-37.degree. as a function of dispersion prepn. technique as a first step to characterize the potential magnitude of such effects on **lung** surfactant replacement. Systems studied in terms of surface pressure-time (.pi.-t) adsorption behavior were pure DPPC, 9:1 DPPC-dipalmitoylphosphatidylethanolamine [**3026-45-7**], 7:3 DPPC:egg **phosphatidylglycerol** (PG), and lipids extd. from cow **lung** lavage. The .pi.-t characteristics can differ significantly depending on the technique by which the DPPC-contg. mixts. are initially dispersed in 0.15 M NaCl soln. Examples of path dependence include the fact that DPPC, which will not adsorb at T = 35.degree. when placed in **powd**. crystals on the subphase surface, exhibits measurable .pi.-t changes after subphase dispersion by sonication or by mech. vortexing.

For 7:3 DPPC-PG, dispersion by sonication on ice or by mech. vortexing gives faster adsorption than dispersion by sonication without temp. control. The effect of heating to T = 45.degree., which is greater than the gel to liq. crystal transition temp. of DPPC (Tc = 41.degree.), is particularly detrimental to the adsorption of 7:3 DPPC-PG. Of the phospholipid mixts. studied, extd. cow **lung** lipids exhibited by far the greatest adsorption capability and also showed less path dependence than 7:3 DPPC-PG. Similarly, in terms of dispersion techniques investigated, sonication on ice tended to give the most rapid adsorption for a given phospholipid mixt. It appears probable that synthetic phospholipid mixts. of identical compn. and app. bulk concn. might give variable therapeutic results for different dispersion methods in the treatment of **respiratory** distress syndrome.

IT **3026-45-7**
RL: PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(aq. phospholipid dispersions contg. **dipalmitoylphosphatidylcholin e** and, adsorption of, artificial **lung** surfactant in relation to)

IT **2644-64-6**
RL: PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(aq. phospholipid dispersions contg., adsorption of, artificial **lung** surfactant in relation to)

=> d his l80-

(FILE 'HCAPLUS' ENTERED AT 12:19:32 ON 14 NOV 2001)
SEL HIT RN L78

FILE 'REGISTRY' ENTERED AT 12:20:23 ON 14 NOV 2001
L80 24 S E8-E33

=> fil reg
FILE 'REGISTRY' ENTERED AT 12:20:48 ON 14 NOV 2001
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2001 American Chemical Society (ACS)

STRUCTURE FILE UPDATES: 12 NOV 2001 HIGHEST RN 369354-32-5
DICTIONARY FILE UPDATES: 12 NOV 2001 HIGHEST RN 369354-32-5

TSCA INFORMATION NOW CURRENT THROUGH July 7, 2001

Please note that search-term pricing does apply when conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

Calculated physical property data is now available. See HELP PROPERTIES for more information. See STNote 27, Searching Properties in the CAS Registry File, for complete details:
http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf

=> d ide can tot l80

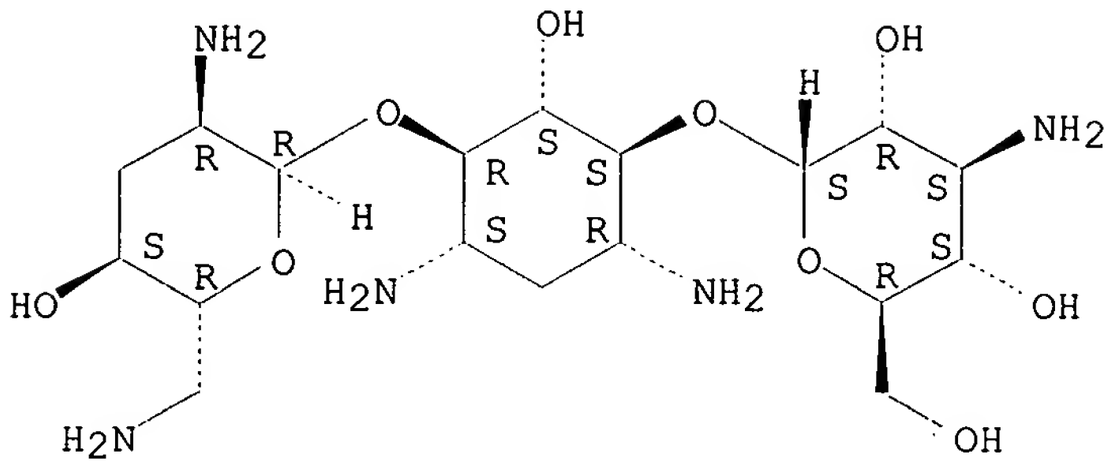
L80 ANSWER 1 OF 24 REGISTRY COPYRIGHT 2001 ACS
RN **112050-64-3** REGISTRY
CN D-Streptamine, O-3-amino-3-deoxy-.alpha.-D-glucopyranosyl-(1.fwdarw.6)-O-[2,6-diamino-2,3,6-trideoxy-.alpha.-D-ribo-hexopyranosyl-(1.fwdarw.4)]-2-deoxy-, phosphate (salt) (9CI) (CA INDEX NAME)
OTHER NAMES:
CN Tobramycin phosphate
FS STEREOSEARCH
MF C18 H37 N5 O9 . x H3 O4 P

SR CA
LC STN Files: CA, CAPLUS, TOXLIT

CM 1

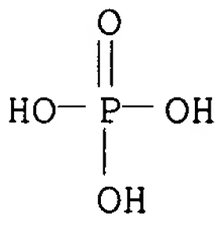
CRN 32986-56-4
CMF C18 H37 N5 O9

Absolute stereochemistry.



CM 2

CRN 7664-38-2
CMF H3 O4 P



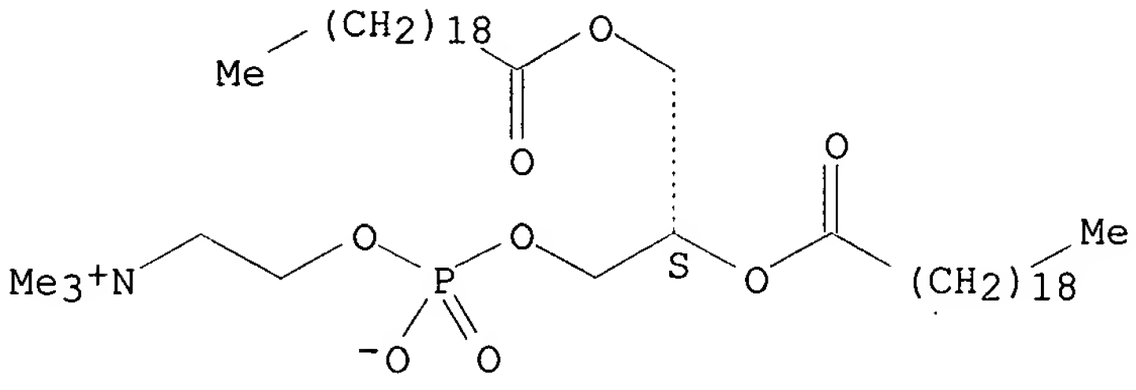
2 REFERENCES IN FILE CA (1967 TO DATE)
2 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 110:199200

REFERENCE 2: 108:26956

L80 ANSWER 2 OF 24 REGISTRY COPYRIGHT 2001 ACS
RN **83061-18-1** REGISTRY
CN 3,5,9-Trioxa-4-phosphanonacosan-1-aminium, 4-hydroxy-N,N,N-trimethyl-10-oxo-7-[(1-oxoeicosyl)oxy]-, inner salt, 4-oxide, (7S)- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 3,5,9-Trioxa-4-phosphanonacosan-1-aminium, 4-hydroxy-N,N,N-trimethyl-10-oxo-7-[(1-oxoeicosyl)oxy]-, inner salt, 4-oxide, (S)-
OTHER NAMES:
CN Diarachidoylphosphatidylcholine
FS STEREOSEARCH
MF C48 H96 N O8 P
CI COM
LC STN Files: BEILSTEIN*, BIOSIS, CA, CAPLUS, TOXLIT, USPATFULL
(*File contains numerically searchable property data)

Absolute stereochemistry.



26 REFERENCES IN FILE CA (1967 TO DATE)
26 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 135:262265

REFERENCE 2: 135:157682

REFERENCE 3: 134:94908

REFERENCE 4: 130:287462

REFERENCE 5: 130:272012

REFERENCE 6: 130:272011

REFERENCE 7: 130:272010

REFERENCE 8: 130:272009

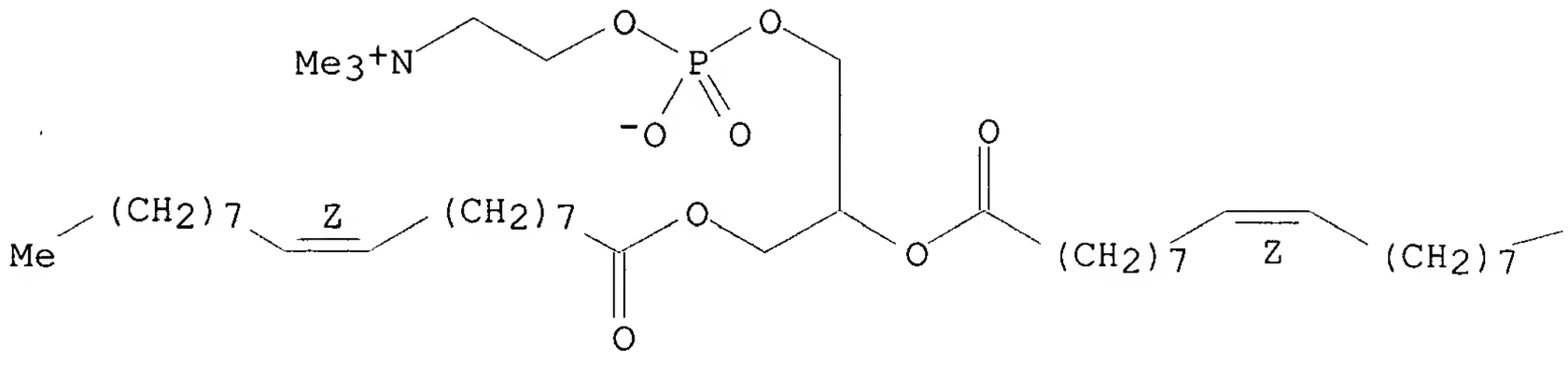
REFERENCE 9: 130:179408

REFERENCE 10: 130:92479

L80 ANSWER 3 OF 24 REGISTRY COPYRIGHT 2001 ACS
RN **68737-67-7** REGISTRY
CN 3,5,9-Trioxa-4-phosphaheptacos-18-en-1-aminium, 4-hydroxy-N,N,N-trimethyl-10-oxo-7-[[(9Z)-1-oxo-9-octadecenyl]oxy]-, inner salt, 4-oxide, (18Z)-(9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 3,5,9-Trioxa-4-phosphaheptacos-18-en-1-aminium, 4-hydroxy-N,N,N-trimethyl-10-oxo-7-[(1-oxo-9-octadecenyl)oxy]-, hydroxide, inner salt, 4-oxide, (Z,Z)-(.+-.)-
OTHER NAMES:
CN 1,2-Dioleoylglycerol-3-phosphorylcholine
CN 1,2-Dioleoylglyceryl-3-phosphorylcholine
CN 1,2-Dioleoyllecithin
CN Dioleoylglycerophosphocholine
CN Dioleoylglycerophosphorylcholine
CN Dioleoylglycerylphosphorylcholine
CN Dioleoyllecithin
CN Dioleoylphosphatidylcholine
CN rac-1,2-Dioleoylglycerol-3-phosphorylcholine
FS STEREOSEARCH
DR **10015-85-7**
MF C44 H84 N O8 P
CI COM
LC STN Files: AGRICOLA, BEILSTEIN*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CANCERLIT, CAOLD, CAPLUS, CHEMLIST, CSCHEM, EMBASE, IPA, MEDLINE, TOXLIT, USPATFULL, VTB
(*File contains numerically searchable property data)
Other Sources: EINECS**
(**Enter CHEMLIST File for up-to-date regulatory information)

Double bond geometry as shown.

PAGE 1-A



PAGE 1-B

Me

197 REFERENCES IN FILE CA (1967 TO DATE)
197 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 135:293972

REFERENCE 2: 135:269027

REFERENCE 3: 135:238465

REFERENCE 4: 135:238324

REFERENCE 5: 135:238317

REFERENCE 6: 135:223158

REFERENCE 7: 135:207005

REFERENCE 8: 135:200466

REFERENCE 9: 135:176912

REFERENCE 10: 135:170593

L80 ANSWER 4 OF 24 REGISTRY COPYRIGHT 2001 ACS
RN **65154-06-5** REGISTRY
CN Blood platelet-activating factor (9CI) (CA INDEX NAME)
OTHER NAMES:
CN 1-O-Alkyl-2-acetyl-sn-glyceryl-3-phosphorylcholine
CN AGEPC
CN Antihypertensive polar renomedullary lipid
CN Blood platelet activating factor-acether
CN PAF
CN PAF-acether
CN Platelet activating factor-acether
CN Platelet-activating factor
MF Unspecified
CI COM, MAN
LC STN Files: ADISNEWS, AGRICOLA, ANABSTR, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CAPLUS, CBNB, CEN, CHEMCATS, CIN, CSCHEM, EMBASE, MEDLINE, MRCK*, PROMT, RTECS*, TOXLIT, USPATFULL
(*File contains numerically searchable property data)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

6698 REFERENCES IN FILE CA (1967 TO DATE)
167 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
6701 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 135:302668

REFERENCE 2: 135:301589

REFERENCE 3: 135:301440

REFERENCE 4: 135:298994

REFERENCE 5: 135:287501

REFERENCE 6: 135:287457

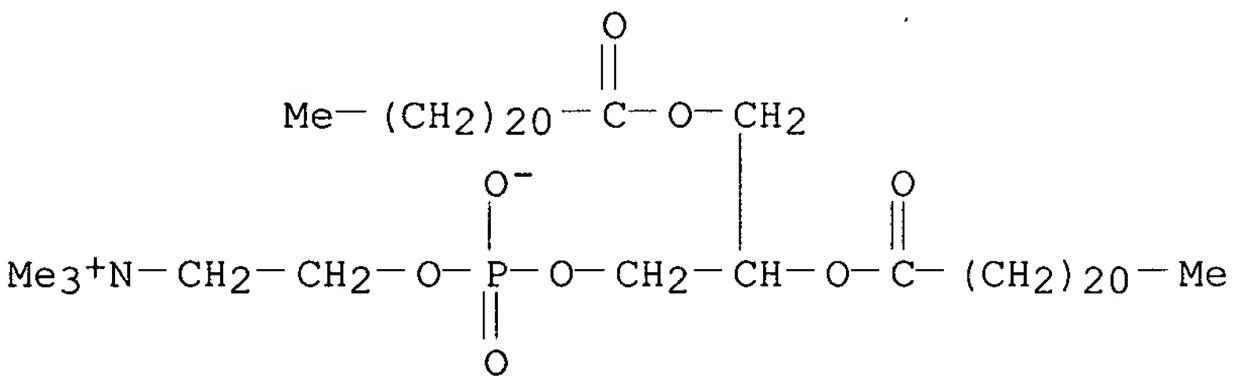
REFERENCE 7: 135:286096

REFERENCE 8: 135:282876

REFERENCE 9: 135:271575

REFERENCE 10: 135:271131

L80 ANSWER 5 OF 24 REGISTRY COPYRIGHT 2001 ACS
RN **64792-89-8** REGISTRY
CN 3,5,9-Trioxa-4-phosphahentriacontan-1-aminium, 4-hydroxy-N,N,N-trimethyl-10-oxo-7-[(1-oxodocosyl)oxy]-, inner salt, 4-oxide (9CI) (CA INDEX NAME)
OTHER NAMES:
CN Dibehenoylphosphatidylcholine
CN Didocosanoylphosphatidylcholine
FS 3D CONCORD
DR 107041-13-4, 117180-32-2
MF C52 H104 N O8 P
CI COM
LC STN Files: BEILSTEIN*, BIOSIS, CA, CAPLUS, IPA, TOXLIT, USPATFULL
(*File contains numerically searchable property data)



67 REFERENCES IN FILE CA (1967 TO DATE)
67 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 135:148928

REFERENCE 2: 135:112029

REFERENCE 3: 134:331621

REFERENCE 4: 134:143543

REFERENCE 5: 134:143536

REFERENCE 6: 134:132019

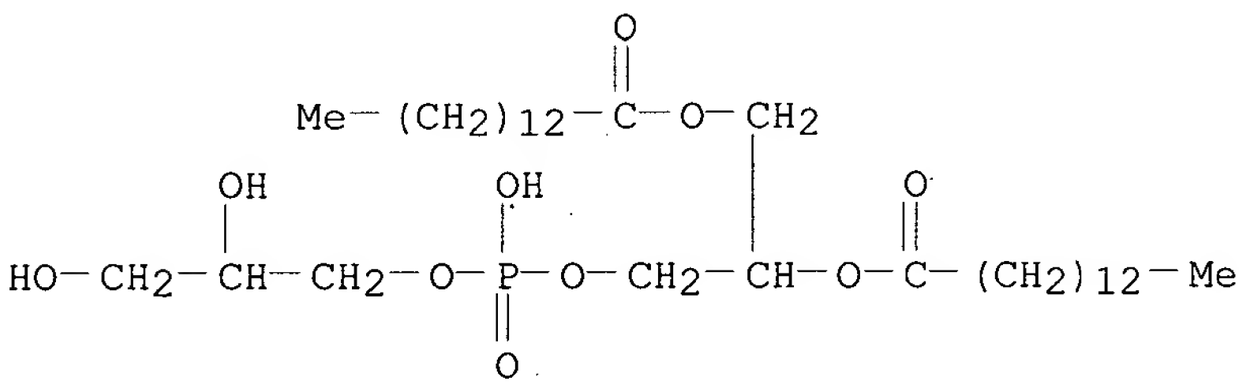
REFERENCE 7: 131:342008

REFERENCE 8: 131:276955

REFERENCE 9: 131:150868

REFERENCE 10: 131:15356

L80 ANSWER 6 OF 24 REGISTRY COPYRIGHT 2001 ACS
RN **61361-72-6** REGISTRY
CN Tetradecanoic acid, 1-[[[(2,3-dihydroxypropoxy)hydroxyphosphinyl]oxy]methyl]-1,2-ethanediyl ester (9CI) (CA INDEX NAME)
OTHER NAMES:
CN Dimyristoylphosphatidylglycerol
FS 3D CONCORD
MF C34 H67 O10 P
CI COM
LC STN Files: AGRICOLA, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CANCERLIT, CAPLUS, CHEMCATS, CSCHEM, EMBASE, IPA, MEDLINE, TOXLIT, USPATFULL



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

615 REFERENCES IN FILE CA (1967 TO DATE)
11 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
619 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 135:293963

REFERENCE 2: 135:293805

REFERENCE 3: 135:277886

REFERENCE 4: 135:262265

REFERENCE 5: 135:223174

REFERENCE 6: 135:191876

REFERENCE 7: 135:185852

REFERENCE 8: 135:170588

REFERENCE 9: 135:148925

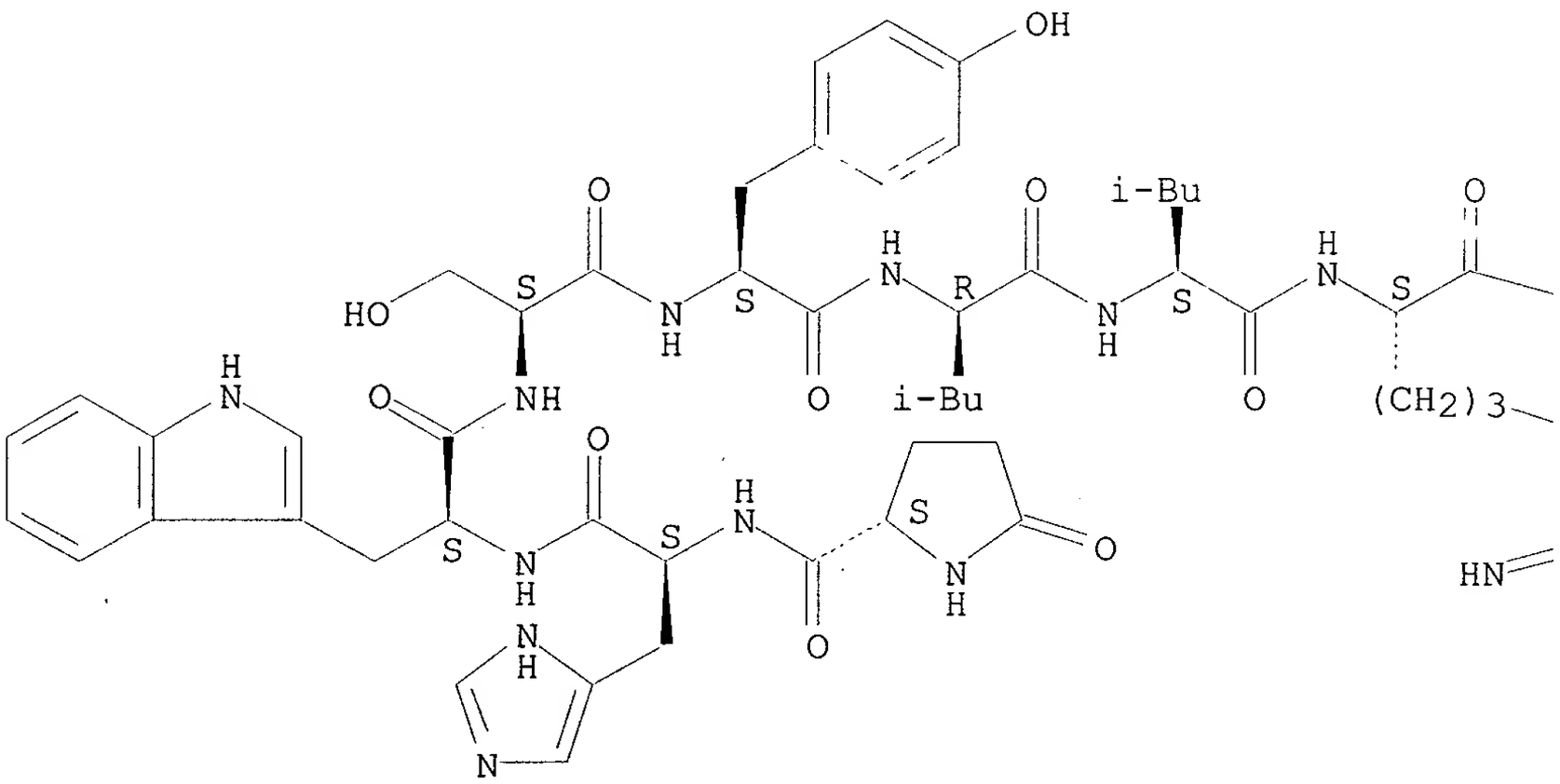
REFERENCE 10: 135:142274

L80 ANSWER 7 OF 24 REGISTRY COPYRIGHT 2001 ACS
RN **53714-56-0** REGISTRY
CN 1-9-Luteinizing hormone-releasing factor (swine), 6-D-leucine-9-(N-ethyl-L-prolinamide)- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Luteinizing hormone-releasing factor (pig), 6-D-leucine-9-(N-ethyl-L-prolinamide)-10-deglycinamide-
OTHER NAMES:

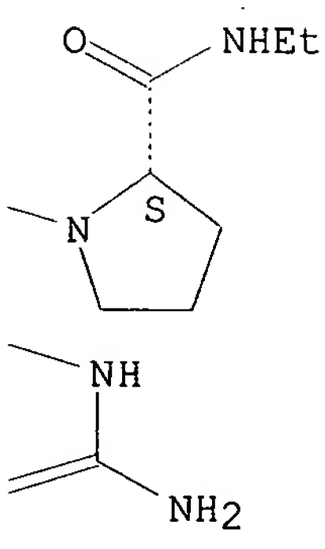
CN (D-Leu6, des-Gly-NH210)-LH-RH ethylamide
CN A 43818
CN D-Leu6-des-Gly10-LH-releasing hormone ethylamide
CN Des-Gly10-[D-Leu6]-LH-releasing hormone ethylamide
CN Des-Gly10-[D-Leu6]LH-RH ethylamide
CN Leuprolide
CN Leuprorelin
CN Lupron SR
CN PGlu-His-Trp-Ser-Tyr-D-Leu-Leu-Arg-Pro-NHC2H5
FS PROTEIN SEQUENCE; STEREOSEARCH
DR 102586-10-7, 71873-71-7, 72648-87-4
MF C59 H84 N16 O12
CI COM
LC STN Files: ADISINSIGHT, ADISNEWS, AGRICOLA, ANABSTR, BEILSTEIN*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CANCERLIT, CAPLUS, CBNB, CEN, CHEMCATS, CIN, CSCHEM, DDFU, DIOGENES, DRUGNL, DRUGPAT, DRUGU, DRUGUPDATES, EMBASE, HSDB*, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MRCK*, PHAR, PROMT, RTECS*, TOXLIT, USPATFULL, VETU
(*File contains numerically searchable property data)
Other Sources: WHO

Absolute stereochemistry. Rotation (-).

PAGE 1-A



PAGE 1-B



471 REFERENCES IN FILE CA (1967 TO DATE)
9 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
474 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 135:308916

REFERENCE 2: 135:294028

REFERENCE 3: 135:288636

REFERENCE 4: 135:272883

REFERENCE 5: 135:262368

REFERENCE 6: 135:221508

REFERENCE 7: 135:205580

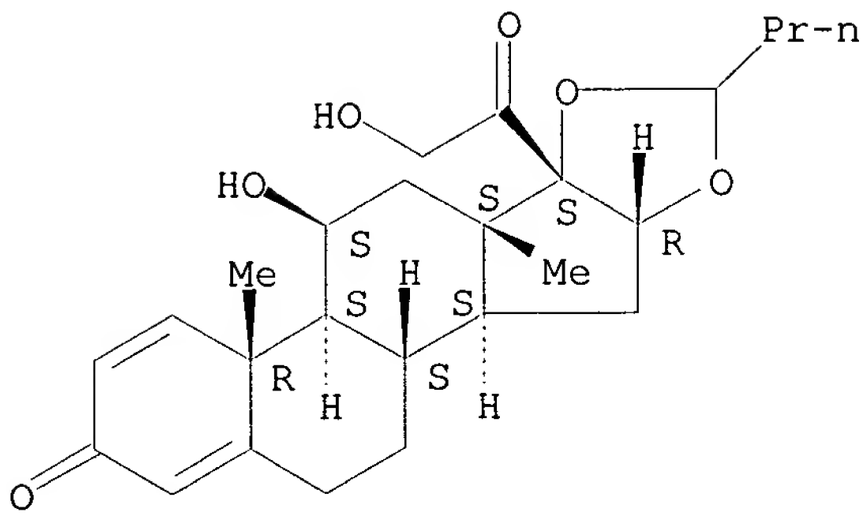
REFERENCE 8: 135:190841

REFERENCE 9: 135:185485

REFERENCE 10: 135:175660

L80 ANSWER 8 OF 24 REGISTRY COPYRIGHT 2001 ACS
RN **51333-22-3** REGISTRY
CN Pregna-1,4-diene-3,20-dione, 16,17-[butylidenebis(oxy)]-11,21-dihydroxy-, (11.beta.,16.alpha.)- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 2H-Naphth[2',1':4,5]indeno[1,2-d][1,3]dioxole, pregna-1,4-diene-3,20-dione deriv.
OTHER NAMES:
CN 16.alpha.,17.alpha.-(Butylidenedioxy)-11.beta.,21-dihydroxypregna-1,4-diene-3,20-dione
CN Budesonide
CN Entocort
CN Preferid
CN Pulmicort
CN Rhinocort
CN Rhinocort Aqua
FS STEREOSEARCH
MF C25 H34 O6
CI COM
LC STN Files: ADISINSIGHT, ADISNEWS, AGRICOLA, ANABSTR, BEILSTEIN*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CANCERLIT, CAPLUS, CASREACT, CBNB, CEN, CHEMCATS, CHEMLIST, CIN, CSCHEM, DDFU, DIOGENES, DRUGNL, DRUGPAT, DRUGU, DRUGUPDATES, EMBASE, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MRCK*, PHAR, PHARMASEARCH, PROMT, RTECS*, SPECINFO, SYNTHLINE, TOXLIT, USAN, USPATFULL
(*File contains numerically searchable property data)
Other Sources: EINECS**, WHO
(**Enter CHEMLIST File for up-to-date regulatory information)

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

785 REFERENCES IN FILE CA (1967 TO DATE)
11 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
794 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 135:298929

REFERENCE 2: 135:298561

REFERENCE 3: 135:298560

REFERENCE 4: 135:298130

REFERENCE 5: 135:283337

REFERENCE 6: 135:282386

REFERENCE 7: 135:267426

REFERENCE 8: 135:266971

REFERENCE 9: 135:262267

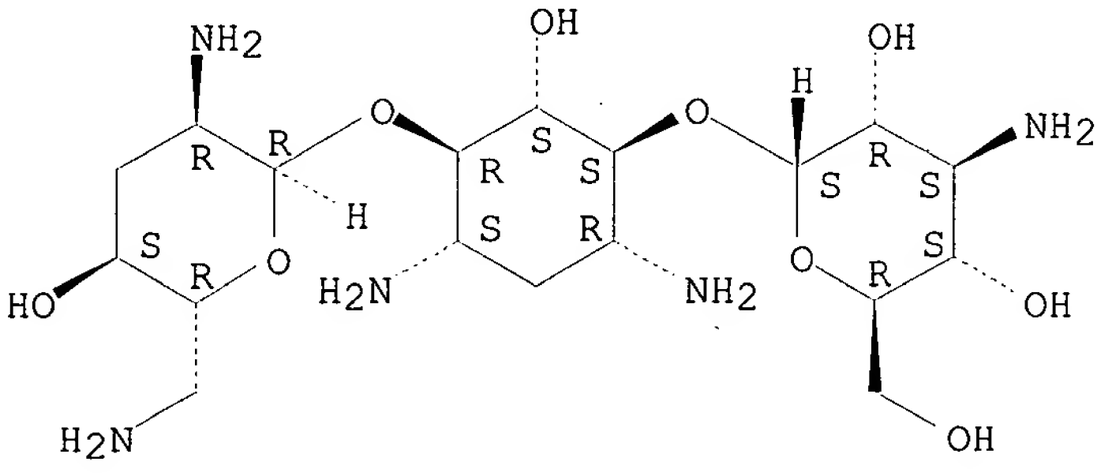
REFERENCE 10: 135:252095

L80 ANSWER 9 OF 24 REGISTRY COPYRIGHT 2001 ACS
RN **49842-07-1** REGISTRY
CN D-Streptamine, O-3-amino-3-deoxy-.alpha.-D-glucopyranosyl-(1.fwdarw.6)-O-[2,6-diamino-2,3,6-trideoxy-.alpha.-D-ribo-hexopyranosyl-(1.fwdarw.4)]-2-deoxy-, sulfate (salt) (9CI) (CA INDEX NAME)
OTHER NAMES:
CN 1-Epitobramycin sulfate
CN Gernebcin
CN Nebcin
CN Obracin
CN Tenemicin
CN Tobramycin sulfate
FS STEREOSEARCH
MF C18 H37 N5 O9 . x H2 O4 S
CI COM
LC STN Files: ADISNEWS, ANABSTR, BEILSTEIN*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CABA, CAPLUS, CASREACT, CBNB, CHEMCATS, CHEMLIST, CIN, CSCHEM, DIOGENES, EMBASE, IPA, MSDS-OHS, PHARMASEARCH, PROMT, RTECS*, TOXLIT, USPATFULL
(*File contains numerically searchable property data)
Other Sources: EINECS**
(**Enter CHEMLIST File for up-to-date regulatory information)

CM 1

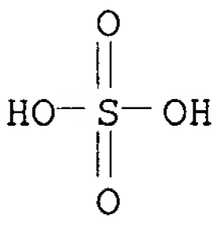
CRN 32986-56-4
CMF C18 H37 N5 O9

Absolute stereochemistry.



CM 2

CRN 7664-93-9
CMF H2 O4 S



179 REFERENCES IN FILE CA (1967 TO DATE)
179 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 135:170587

REFERENCE 2: 135:131760

REFERENCE 3: 135:51028

REFERENCE 4: 135:37082

REFERENCE 5: 134:32962

REFERENCE 6: 134:32924

REFERENCE 7: 134:2494

REFERENCE 8: 133:155451

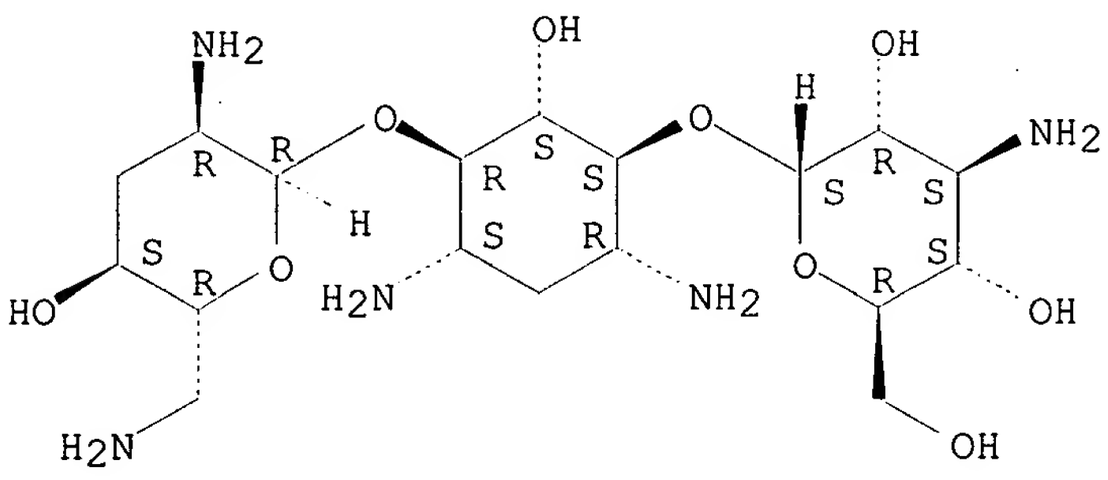
REFERENCE 9: 133:144904

REFERENCE 10: 133:34419

L80 ANSWER 10 OF 24 REGISTRY COPYRIGHT 2001 ACS
RN **32986-56-4** REGISTRY
CN D-Streptamine, O-3-amino-3-deoxy-.alpha.-D-glucopyranosyl-(1.fwdarw.6)-O-[2,6-diamino-2,3,6-trideoxy-.alpha.-D-ribo-hexopyranosyl-(1.fwdarw.4)]-2-deoxy- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Streptamine, O-3-amino-3-deoxy-.alpha.-D-glucopyranosyl-(1.fwdarw.4)-O-[2,6-diamino-2,3,6-trideoxy-.alpha.-D-ribo-hexopyranosyl-(1.fwdarw.6)]-2-deoxy-, D- (8CI)
OTHER NAMES:

CN 3'-Deoxykanamycin B
CN Deoxykanamycin B
CN Nebramycin 6
CN Nebramycin factor 6
CN Nebramycin VI
CN O-3-Amino-3-deoxy-.alpha.-D-glucopyranosyl-(1.fwdarw.4)-O-[2,6-diamino-2,3,6-trideoxy-.alpha.-D-ribo-hexopyranosyl-(1.fwdarw.6)]-2-deoxystreptamine
CN Tobralex
CN Tobramicin
CN Tobramycetin
CN Tobramycin
CN Tobrex
FS STEREOSEARCH
DR 11098-01-4, 11111-45-8, 54330-95-9, 37321-13-4, 34337-51-4
MF C18 H37 N5 O9
CI COM
LC STN Files: ADISINSIGHT, ADISNEWS, AGRICOLA, ANABSTR, BEILSTEIN*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CABA, CANCERLIT, CAPLUS, CASREACT, CBNB, CEN, CHEMCATS, CHEMLIST, CIN, CSCHEM, DDFU, DIOGENES, DRUGPAT, DRUGU, EMBASE, HSDB*, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MRCK*, NAPRALERT, NIOSHTIC, PHAR, PHARMASEARCH, PIRA, PROMT, RTECS*, SPECINFO, TOXLIT, USAN, USPATFULL, VETU
(*File contains numerically searchable property data)
Other Sources: EINECS**, WHO
(**Enter CHEMLIST File for up-to-date regulatory information)

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

3644 REFERENCES IN FILE CA (1967 TO DATE)
51 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
3652 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 135:286018

REFERENCE 2: 135:282639

REFERENCE 3: 135:269942

REFERENCE 4: 135:269931

REFERENCE 5: 135:269925

REFERENCE 6: 135:269918

REFERENCE 7: 135:266664

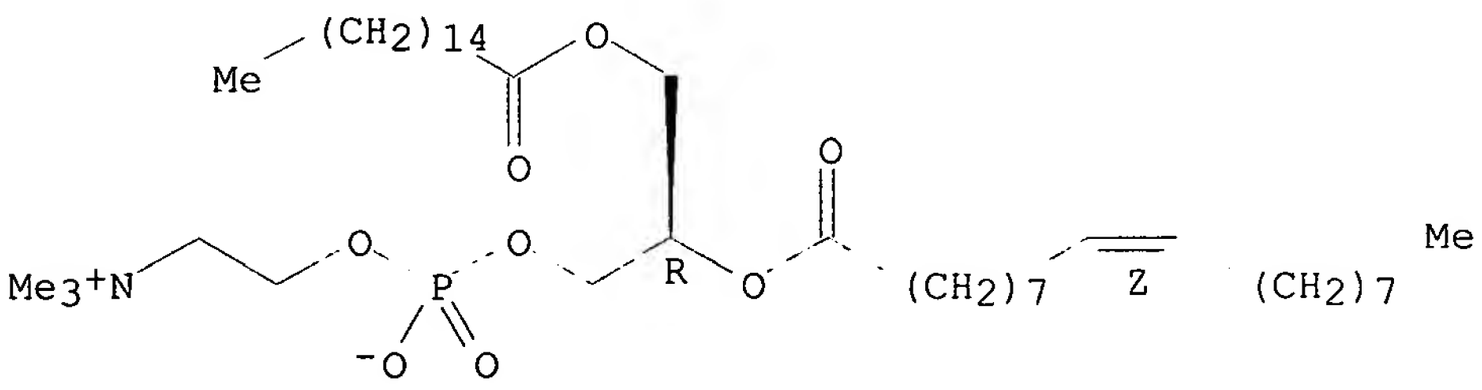
REFERENCE 8: 135:266651

REFERENCE 9: 135:262287

REFERENCE 10: 135:254358

L80 ANSWER 11 OF 24 REGISTRY COPYRIGHT 2001 ACS
RN **26853-31-6** REGISTRY
CN 3,5,8-Trioxa-4-phosphahexacos-17-en-1-aminium, 4-hydroxy-N,N,N-trimethyl-9-oxo-7-[[(1-oxohexadecyl)oxy]methyl]-, inner salt, 4-oxide, (7R,17Z)- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 3,5,8-Trioxa-4-phosphahexacos-17-en-1-aminium, 4-hydroxy-N,N,N-trimethyl-9-oxo-7-[[(1-oxohexadecyl)oxy]methyl]-, hydroxide, inner salt, 4-oxide, [R-(Z)]-
CN Choline, hydroxide, dihydrogen phosphate, inner salt, ester with 1-palmito-2-olein, L- (8CI)
OTHER NAMES:
CN .beta.-Oleoyl-.gamma.-palmitoyl-L-.alpha.-phosphatidylcholine
CN 1-Palmitoyl-2-oleoyl-3-sn-phosphatidylcholine
CN 1-Palmitoyl-2-oleoyl-L-.alpha.-lecithin
CN 1-Palmitoyl-2-oleoyl-L-.alpha.-phosphatidylcholine
CN 1-Palmitoyl-2-oleoyl-sn-3-phosphocholine
CN 1-Palmitoyl-2-oleoyl-sn-glycero-3-phosphatidylcholine
CN 1-Palmitoyl-2-oleoyl-sn-glycero-3-phosphocholine
CN 1-Palmitoyl-2-oleoyl-sn-glycero-3-phosphocholine
CN 1-Palmitoyl-2-oleoyl-sn-glycero-3-phosphorylcholine
CN 1-Palmitoyl-2-oleoyl-sn-glycero-phosphatidylcholine
CN 1-Palmitoyl-2-oleoyl-sn-glycero-phosphocholine
CN 1-Palmitoyl-2-oleoyl-sn-glycerol-3-phosphatidylcholine
CN 1-Palmitoyl-2-oleoyl-sn-glyceryl-3-phosphorylcholine
CN 1-Palmitoyl-2-oleoylphosphatidylcholine
CN 1-Palmitoyl-2-oleyl-3-sn-phosphatidylcholine
CN 3,5,8-Trioxa-4-phosphahexacos-17-en-1-aminium, 4-hydroxy-N,N,N-trimethyl-9-oxo-7-[[(1-oxohexadecyl)oxy]methyl]-, inner salt, 4-oxide, [R-(Z)]-
CN L-.alpha.-1-Palmitoyl-2-oleoylphosphatidylcholine
CN Palmitoyloleoylphosphatidylcholine
CN POPC
FS STEREOSEARCH
DR 210579-12-7
MF C42 H82 N O8 P
CI COM
LC STN Files: AGRICOLA, BEILSTEIN*, BIOBUSINESS, BIOSIS, CA, CAPLUS, CASREACT, CHEMCATS, CHEMLIST, CSCHEM, IPA, MSDS-OHS, TOXLIT, USPATFULL
(*File contains numerically searchable property data)
Other Sources: EINECS**
(**Enter CHEMLIST File for up-to-date regulatory information)

Absolute stereochemistry. Rotation (+).
Double bond geometry as shown.



916 REFERENCES IN FILE CA (1967 TO DATE)
12 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
917 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 135:312906

REFERENCE 2: 135:301384

REFERENCE 3: 135:300173

REFERENCE 4: 135:298791

REFERENCE 5: 135:269028

REFERENCE 6: 135:253475

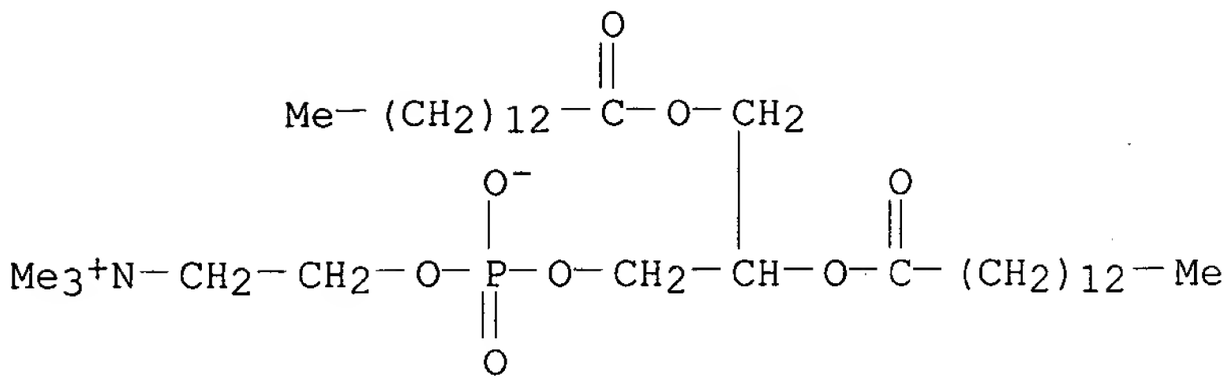
REFERENCE 7: 135:238312

REFERENCE 8: 135:238241

REFERENCE 9: 135:236440

REFERENCE 10: 135:226648

L80 ANSWER 12 OF 24 REGISTRY COPYRIGHT 2001 ACS
RN **18656-38-7** REGISTRY
CN 3,5,9-Trioxa-4-phosphatricosan-1-aminium, 4-hydroxy-N,N,N-trimethyl-10-oxo-7-[(1-oxotetradecyl)oxy]-, inner salt, 4-oxide (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 3,5,9-Trioxa-4-phosphatricosan-1-aminium, 4-hydroxy-N,N,N-trimethyl-10-oxo-7-[(1-oxotetradecyl)oxy]-, inner salt, 4-oxide, (.+-.)-
CN Choline, hydroxide, dihydrogen phosphate, inner salt, ester with 1,2-dimyristin, DL- (8CI)
CN Choline, phosphate, ester with DL-1,2-dimyristin (6CI)
CN Myristin, 1,2-di-, dihydrogen phosphate, monoester with choline hydroxide, inner salt, DL- (8CI)
OTHER NAMES:
CN 1,2-Dimyristoyl-3-lecithin
CN 1,2-Dimyristoyl-DL-phosphatidylcholine
CN 1,2-Dimyristoylglycerol-3-phosphorylcholine
CN 1,2-Dimyristoyllecithin
CN 1,2-Ditetradecanoylphosphatidylcholine
CN 1,2-Ditetradecyl-rac-glycero-3-phosphocholine
CN 1,2-rac-Dimyristoylglycero-3-phosphocholine
CN Choline, hydroxide, dihydrogen phosphate, inner salt, ester with 1,2-dimyristin
CN Dimyristoyl glycerophosphocholine
CN Dimyristoyl-.alpha.-lecithin
CN Dimyristoyl-DL-.alpha.-phosphatidylcholine
CN Dimyristoyllecithin
CN Dimyristoylphosphatidylcholine
CN Ditetradecanoylglycerophosphorylcholine
CN Ditetradecanoylphosphatidylcholine
CN DL-.alpha.-Dimyristoylglycerophosphocholine
CN DL-.beta.,.gamma.-Dimyristoyl-.alpha.-lecithin
CN DL-Dimyristoyllecithin
CN DMPC
FS 3D CONCORD
DR **13699-35-9, 13699-48-4**
MF C36 H72 N O8 P
CI COM
LC STN Files: ADISNEWS, AGRICOLA, BEILSTEIN*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CEN, CHEMCATS, CHEMINFORMRX, CHEMLIST, CIN, CSCHEM, DDFU, DRUGU, EMBASE, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MSDS-OHS, NIOSHTIC, PIRA, PROMT, TOXLIT, USPATFULL
(*File contains numerically searchable property data)
Other Sources: EINECS**
(**Enter CHEMLIST File for up-to-date regulatory information)



636 REFERENCES IN FILE CA (1967 TO DATE)
9 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
643 REFERENCES IN FILE CAPLUS (1967 TO DATE)
2 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 135:300214

REFERENCE 2: 135:299687

REFERENCE 3: 135:285242

REFERENCE 4: 135:284779

REFERENCE 5: 135:277886

REFERENCE 6: 135:269031

REFERENCE 7: 135:253470

REFERENCE 8: 135:238324

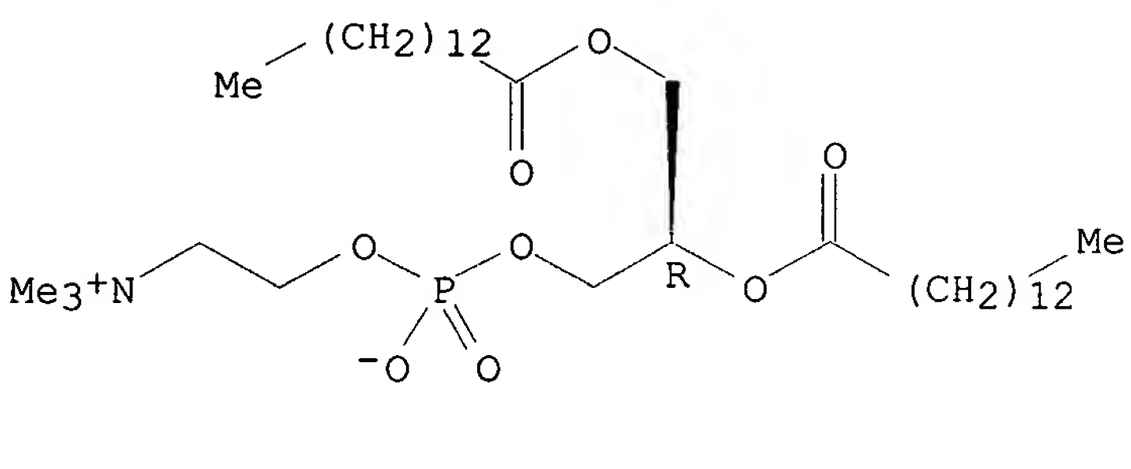
REFERENCE 9: 135:238321

REFERENCE 10: 135:238317

L80 ANSWER 13 OF 24 REGISTRY COPYRIGHT 2001 ACS
RN **18194-24-6** REGISTRY
CN 3,5,9-Trioxa-4-phosphatricosan-1-aminium, 4-hydroxy-N,N,N-trimethyl-10-oxo-7-[(1-oxotetradecyl)oxy]-, inner salt, 4-oxide, (7R)- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 3,5,9-Trioxa-4-phosphatricosan-1-aminium, 4-hydroxy-N,N,N-trimethyl-10-oxo-7-[(1-oxotetradecyl)oxy]-, hydroxide, inner salt, 4-oxide, (R)-
CN Choline, hydroxide, dihydrogen phosphate, inner salt, ester with 1,2-dimyristin, L- (8CI)
CN Choline, phosphate, ester with L-1,2-dimyristin (6CI)
OTHER NAMES:
CN .beta.,.gamma.-Dimyristoyl L-.alpha.-phosphatidylcholine
CN 1,2-Bis(myristoyl)-sn-glycerophosphocholine
CN 1,2-Dimyristoyl-3-sn-phosphatidylcholine
CN 1,2-Dimyristoyl-L-.alpha.-phosphatidylcholine
CN 1,2-Dimyristoyl-L-3-phosphatidylcholine
CN 1,2-Dimyristoyl-L-phosphatidylcholine
CN 1,2-Dimyristoyl-sn-3-glycerophosphocholine
CN 1,2-Dimyristoyl-sn-glycero-3-phosphatidylcholine
CN 1,2-Dimyristoyl-sn-glycero-3-phosphatidylcholine
CN 1,2-Dimyristoyl-sn-glycero-3-phosphocholine
CN 1,2-Dimyristoyl-sn-glycero-3-phosphocholine
CN 1,2-Dimyristoyl-sn-glycero-3-phosphorylcholine
CN 1,2-Dimyristoyl-sn-glycerol-3-phosphocholine
CN 1,2-Dimyristoyl-sn-glycerol-3-phosphorylcholine
CN 1,2-Dimyristoyl-sn-glycerophosphocholine
CN 1,2-Dimyristoyl-sn-phosphatidylcholine
CN 1,2-Dimyristoylphosphatidylcholine

CN 1,2-Ditetradecanoyl-sn-glycero-3-phosphocholine
CN 1,2-Ditetradecanoyl-sn-glycero-3-phosphocholine
CN 1,2-Ditetradecanoyl-sn-glycero-3-phosphorylcholine
CN 1,2-L-.alpha.-Dimyristoylphosphatidylcholine
CN 1,2-Myristoyl-sn-glycero-3-phosphocholine
CN 3,5,9-Trioxa-4-phosphatricosan-1-aminium, 4-hydroxy-N,N,N-trimethyl-10-oxo-7-[(1-oxotetradecyl)oxy]-, inner salt, 4-oxide, (R)-
CN Dimyristoyl sn-3-phosphatidylcholine
CN Dimyristoyl-3-sn-phosphatidylcholine
CN Dimyristoyl-L-.alpha.-glycerophosphocholine
CN Dimyristoyl-L-.alpha.-lecithin
CN Dimyristoyl-L-.alpha.-phosphatidylcholine
CN Dimyristoyl-sn-glycero-3-phosphocholine
CN Dimyristoylphosphatidylcholine
CN Ditetradecanoyllecithin
CN DMPC
CN L-.alpha.-Dimyristoyllecithin
CN L-.alpha.-Dimyristoylphosphatidylcholine
CN L-.beta.,.gamma.-Dimyristoyl-.alpha.-lecithin
CN L-.beta.,.gamma.-Dimyristoyl-.alpha.-phosphatidylcholine
CN L-1,2-Dimyristoylphosphatidylcholine
CN L-Dimyristoyllecithin
CN L-Dimyristoylphosphatidylcholine
CN sn-3-Dimyristoyllecithin
FS STEREOSEARCH
MF C36 H72 N O8 P
CI COM
LC STN Files: ADISNEWS, AGRICOLA, BEILSTEIN*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CAOLD, CAPLUS, CASREACT, CEN, CHEMCATS, CHEMLIST, CIN, CSCHEM, EMBASE, IPA, MSDS-OHS, PIRA, PROMT, SPECINFO, TOXLIT, USPATFULL
(*File contains numerically searchable property data)
Other Sources: EINECS**
(**Enter CHEMLIST File for up-to-date regulatory information)

Absolute stereochemistry.



2249 REFERENCES IN FILE CA (1967 TO DATE)
45 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
2254 REFERENCES IN FILE CAPLUS (1967 TO DATE)
4 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 135:300220

REFERENCE 2: 135:300173

REFERENCE 3: 135:293963

REFERENCE 4: 135:293805

REFERENCE 5: 135:269637

REFERENCE 6: 135:266006

REFERENCE 7: 135:262617

REFERENCE 8: 135:253475

REFERENCE 9: 135:238893

REFERENCE 10: 135:238330

L80 ANSWER 14 OF 24 REGISTRY COPYRIGHT 2001 ACS
RN **9002-64-6** REGISTRY
CN Parathormone (9CI) (CA INDEX NAME)
OTHER NAMES:
CN Hormones (animal), parathyroid
CN Kakerbin
CN Parathormone(1-84)
CN Parathyrin
CN Parathyroid hormone
CN Parathyroidin
CN PTH
DR 8002-77-5, 9039-27-4
MF Unspecified
CI PMS, COM, MAN
PCT Manual registration
LC STN Files: ADISINSIGHT, ADISNEWS, AGRICOLA, ANABSTR, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CABA, CAPLUS, CASREACT, CBNB, CHEMCATS, CHEMLIST, CIN, CSCHEM, DDFU, DRUGU, EMBASE, HSDB*, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MRCK*, NAPRALERT, PHAR, PROMT, RTECS*, TOXLIT, USAN, USPATFULL
(*File contains numerically searchable property data)
Other Sources: NDSL**, TSCA**
(**Enter CHEMLIST File for up-to-date regulatory information)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
8897 REFERENCES IN FILE CA (1967 TO DATE)
242 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
8911 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 135:303183

REFERENCE 2: 135:303181

REFERENCE 3: 135:303178

REFERENCE 4: 135:302139

REFERENCE 5: 135:302129

REFERENCE 6: 135:301639

REFERENCE 7: 135:301575

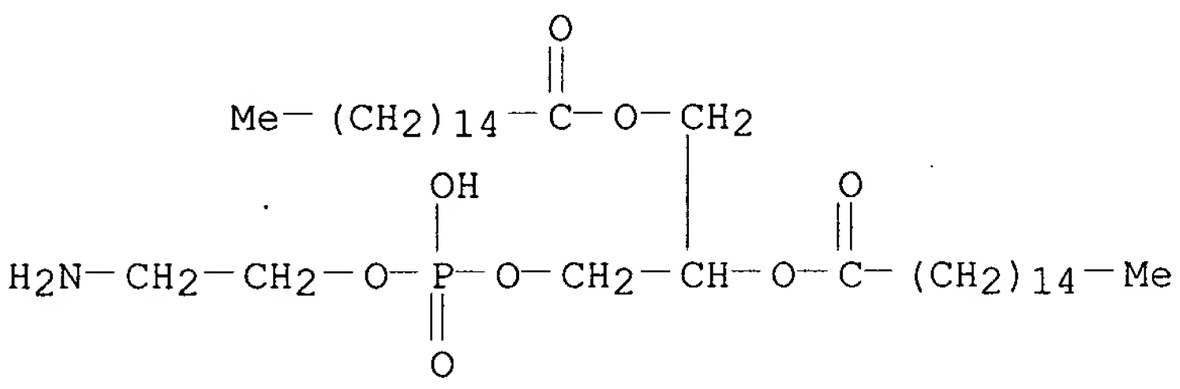
REFERENCE 8: 135:301351

REFERENCE 9: 135:299089

REFERENCE 10: 135:298865

L80 ANSWER 15 OF 24 REGISTRY COPYRIGHT 2001 ACS
RN 5681-36-7 REGISTRY
CN Hexadecanoic acid, 1-[[[(2-aminoethoxy)hydroxyphosphinyl]oxy]methyl]-1,2-ethanediyl ester (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Ethanol, 2-amino-, dihydrogen phosphate (ester), monoester with 1,2-dipalmitin, DL- (8CI)
CN Hexadecanoic acid, 1-[[[(2-aminoethoxy)hydroxyphosphinyl]oxy]methyl]-1,2-ethanediyl ester, (.+-.)-
CN Palmitin, 1,2-di-, 2-aminoethyl hydrogen phosphate, DL- (8CI)
CN Palmitin, 1,2-di-, phosphate, 2-aminoethyl ester, dl- (6CI)
OTHER NAMES:

CN .alpha.-Cephalin, .beta.,.gamma.-dipalmitoyl-
CN .beta.,.gamma.-Dipalmitoyl-DL-.alpha.-cephalin
CN 1,2-Dipalmitoyl glycerylphosphorylethanolamine
CN 1,2-Dipalmitoyl-3-DL-glycerylphosphorylethanolamine
CN 1,2-Dipalmitoyl-DL-3-glycerophosphatidylethanolamine
CN 1,2-Dipalmitoyl-DL-phosphatidylethanolamine
CN 1,2-Dipalmitoyl-rac-glycerophosphoethanolamine
CN 1,2-Dipalmitoylphosphatidylethanolamine
CN Dipalmitoyl cephalin
CN Dipalmitoylphosphatidylethanolamine
CN DL-.alpha.-Cephalin dipalmitate
CN DL-.alpha.-Dipalmitoylphosphatidylethanolamine
CN DL-Dipalmitoylphosphatidylethanolamine
CN DPPE
FS 3D CONCORD
DR **3026-45-7**
MF C37 H74 N O8 P
CI COM
LC STN Files: AGRICOLA, BEILSTEIN*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CHEMCATS, CHEMLIST, CSCHEM, EMBASE, IPA, MEDLINE, PROMT, SPECINFO, TOXLIT, USPATFULL
(*File contains numerically searchable property data)
Other Sources: EINECS**
(**Enter CHEMLIST File for up-to-date regulatory information)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

277 REFERENCES IN FILE CA (1967 TO DATE)
50 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
281 REFERENCES IN FILE CAPLUS (1967 TO DATE)
7 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 135:287485

REFERENCE 2: 135:269032

REFERENCE 3: 135:269020

REFERENCE 4: 135:262085

REFERENCE 5: 135:238877

REFERENCE 6: 135:223655

REFERENCE 7: 135:223476

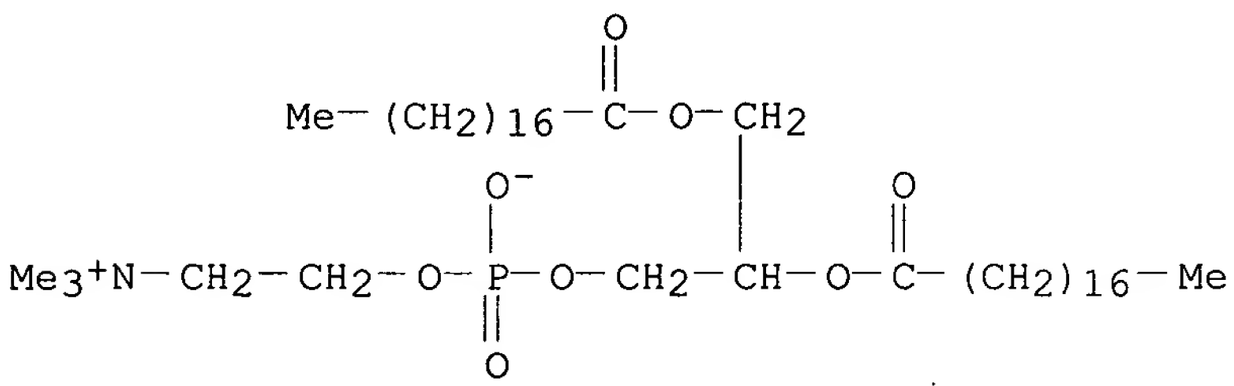
REFERENCE 8: 135:223158

REFERENCE 9: 135:216022

REFERENCE 10: 135:191950

L80 ANSWER 16 OF 24 REGISTRY COPYRIGHT 2001 ACS

RN **4539-70-2** REGISTRY
CN 3,5,9-Trioxa-4-phosphaheptacosan-1-aminium, 4-hydroxy-N,N,N-trimethyl-10-oxo-7-[(1-oxooctadecyl)oxy]-, inner salt, 4-oxide (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Choline phosphate, 3-ester with 1,2-distearin (6CI)
CN Choline, hydroxide, dihydrogen phosphate, inner salt, ester with 1,2-distearin (8CI)
OTHER NAMES:
CN (.+-.)-1,2-Distearoylglycero-3-phosphorylcholine
CN .beta.,.gamma.-Distearoylphosphatidylcholine
CN 1,2-Dioctadecanoyl-rac-glycerol-3-phosphorylcholine
CN 1,2-Distearoyl-3-glycerophosphorylcholine
CN 1,2-Distearoyl-DL-phosphatidylcholine
CN 1,2-Distearoylglycerol-3-phosphorylcholine
CN 1,2-Distearoylglyceryl 3-phosphorylcholine
CN 1,2-Distearoyllecithin
CN Coatsome MC 8080
CN Dioctadecanoyl phosphatidylcholine
CN Dioctadecanoyllecithin
CN Distearoyl-DL-.alpha.-phosphatidylcholine
CN Distearoyl-DL-phosphatidylcholine
CN Distearoyllecithin
CN Distearoylphosphatidylcholine
CN DL-.alpha.-Distearoyllecithin
CN DSPC
FS 3D CONCORD
DR 816-93-3, 159022-80-7, 107041-14-5, 201412-81-9
MF C44 H88 N O8 P
CI COM
LC STN Files: AGRICOLA, BEILSTEIN*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CHEMCATS, CSCHEM, DDFU, DETHERM*, DRUGU, EMBASE, IPA, MEDLINE, PROMT, TOXLIT, USPATFULL
(*File contains numerically searchable property data)



1195 REFERENCES IN FILE CA (1967 TO DATE)
21 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
1200 REFERENCES IN FILE CAPLUS (1967 TO DATE)
2 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 135:293857

REFERENCE 2: 135:285242

REFERENCE 3: 135:284779

REFERENCE 4: 135:262265

REFERENCE 5: 135:223317

REFERENCE 6: 135:223158

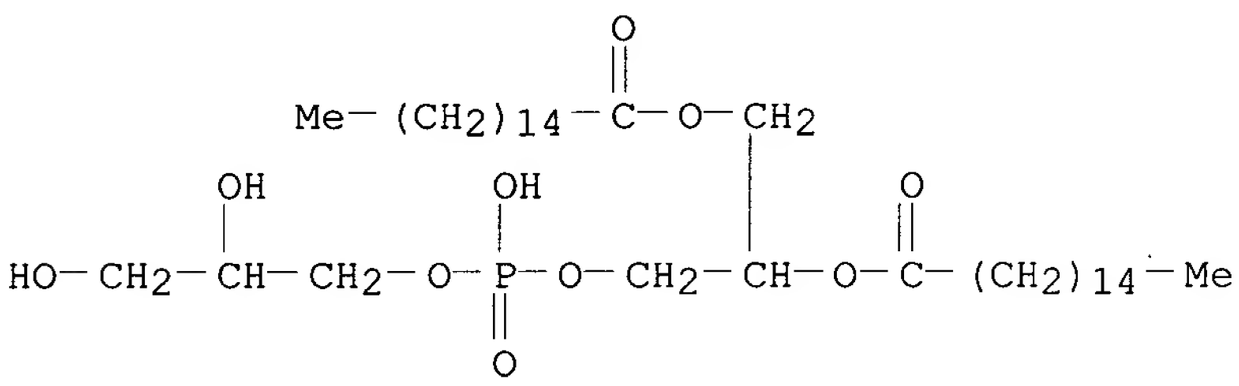
REFERENCE 7: 135:200506

REFERENCE 8: 135:176634

REFERENCE 9: 135:157682

REFERENCE 10: 135:148936

L80 ANSWER 17 OF 24 REGISTRY COPYRIGHT 2001 ACS
RN **4537-77-3** REGISTRY
CN Hexadecanoic acid, 1-[[[(2,3-dihydroxypropoxy)hydroxyphosphinyl]oxy]methyl]-1,2-ethanediyl ester (9CI) (CA INDEX NAME)
OTHER NAMES:
CN 1,2-Dipalmitoyl-sn-glycero-3-phosphoryl-rac-glycerol
CN 1,2-Dipalmitoylphosphatidylglycerol
CN Dipalmitoylphosphatidylglycerol
CN DPPG
FS 3D CONCORD
MF C38 H75 O10 P
CI COM
LC STN Files: AGRICOLA, BEILSTEIN*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CANCERLIT, CAPLUS, CASREACT, CHEMCATS, CSCHEM, DDFU, DRUGU, EMBASE, IPA, MEDLINE, TOXLIT, USPATFULL
(*File contains numerically searchable property data)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

709 REFERENCES IN FILE CA (1967 TO DATE)
6 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
713 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 135:308719

REFERENCE 2: 135:269020

REFERENCE 3: 135:262265

REFERENCE 4: 135:254359

REFERENCE 5: 135:243871

REFERENCE 6: 135:231754

REFERENCE 7: 135:231577

REFERENCE 8: 135:223476

REFERENCE 9: 135:200447

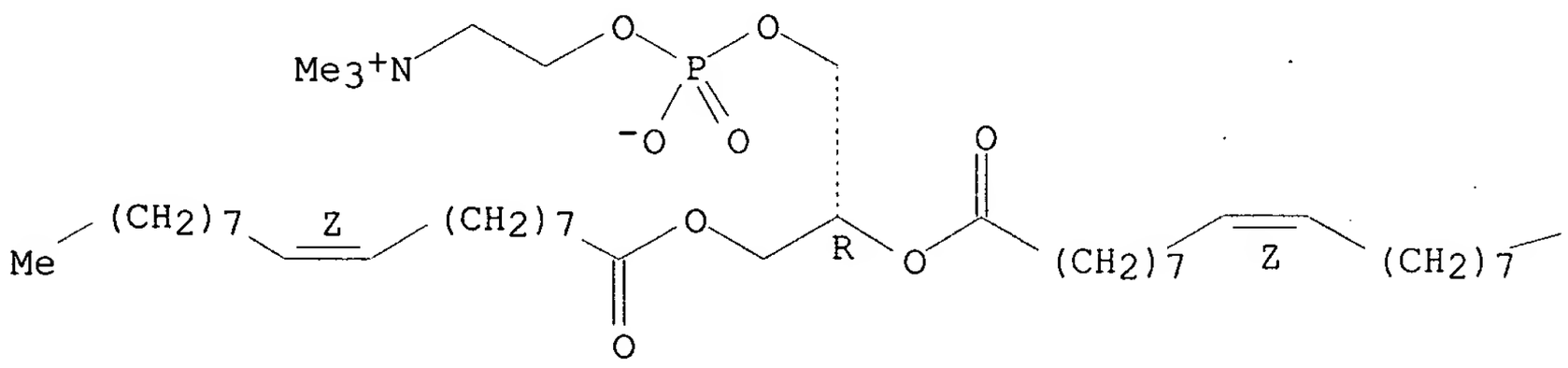
REFERENCE 10: 135:191943

L80 ANSWER 18 OF 24 REGISTRY COPYRIGHT 2001 ACS
RN **4235-95-4** REGISTRY
CN 3,5,9-Trioxa-4-phosphaheptacos-18-en-1-aminium, 4-hydroxy-N,N,N-trimethyl-10-oxo-7-[[(9Z)-1-oxo-9-octadecenyl]oxy]-, inner salt, 4-oxide, (7R,18Z)-(9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:
CN 3,5,9-Trioxa-4-phosphaheptacos-18-en-1-aminium, 4-hydroxy-N,N,N-trimethyl-10-oxo-7-[(1-oxo-9-octadecenyl)oxy]-, hydroxide, inner salt, 4-oxide, [R-(Z,Z)]-
CN Choline phosphate, 3-ester with L-1,2-diolein (6CI)
CN Choline, hydroxide, dihydrogen phosphate, inner salt, ester with L-1,2-diolein (8CI)
CN Olein, 1,2-di-, L-, dihydrogen phosphate, monoester with choline hydroxide (8CI)
OTHER NAMES:
CN 1,2-Dioleoyl-L-.alpha.-lecithin
CN 1,2-Dioleoyl-sn-glycero-3-phosphatidylcholine
CN 1,2-Dioleoyl-sn-glycero-3-phosphatidylcholine
CN 1,2-dioleoyl-sn-glycero-3-phosphocholine
CN 1,2-Dioleoyl-sn-glycero-3-phosphocholine
CN 1,2-Dioleoyl-sn-glycero-3-phosphorylcholine
CN 1,2-Dioleoyl-sn-glycerol-3-phosphorylcholine
CN 1,2-Dioleoyl-sn-phosphatidylcholine
CN 1,2-Dioleyl-sn-glycero-3-phosphorylcholine
CN 3,5,9-Trioxa-4-phosphaheptacos-18-en-1-aminium, 4-hydroxy-N,N,N-trimethyl-10-oxo-7-[(1-oxo-9-octadecenyl)oxy]-, inner salt, 4-oxide, [R-(Z,Z)]-
CN Dioleoyl L-.alpha.-lecithin
CN Dioleoyl-3-sn-phosphatidylcholine
CN Dioleoyl-L-.alpha.-glycerophosphocholine
CN Dioleoyl-L-.alpha.-glycerophosphorylcholine
CN Dioleoyl-L-.alpha.-phosphatidylcholine
CN DOPC
CN L-.alpha.-Di(cis-9-octadecanoyl) lecithin
CN L-.alpha.-Dioleoyl phosphatidylcholine
CN L-.alpha.-Dioleoyllecithin
CN L-.alpha.-Dioleylphosphatidylcholine
CN L-Dioleoyl lecithin
CN sn-3-Dioleoyllecithin
FS STEREOSEARCH
DR 53695-00-4
MF C44 H84 N O8 P
CI COM
LC STN Files: AGRICOLA, BEILSTEIN*, BIOBUSINESS, BIOSIS, CA, CAOLD, CAPLUS, CHEMCATS, CHEMLIST, CSCHEM, IPA, TOXLIT, USPATFULL
(*File contains numerically searchable property data)
Other Sources: EINECS**
(**Enter CHEMLIST File for up-to-date regulatory information)

Absolute stereochemistry. Rotation (+).
Double bond geometry as shown.

PAGE 1-A



PAGE 1-B

Me

1274 REFERENCES IN FILE CA (1967 TO DATE)
14 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
1278 REFERENCES IN FILE CAPLUS (1967 TO DATE)
4 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 135:303132

REFERENCE 2: 135:301384

REFERENCE 3: 135:300223

REFERENCE 4: 135:300187

REFERENCE 5: 135:285279

REFERENCE 6: 135:284780

REFERENCE 7: 135:284771

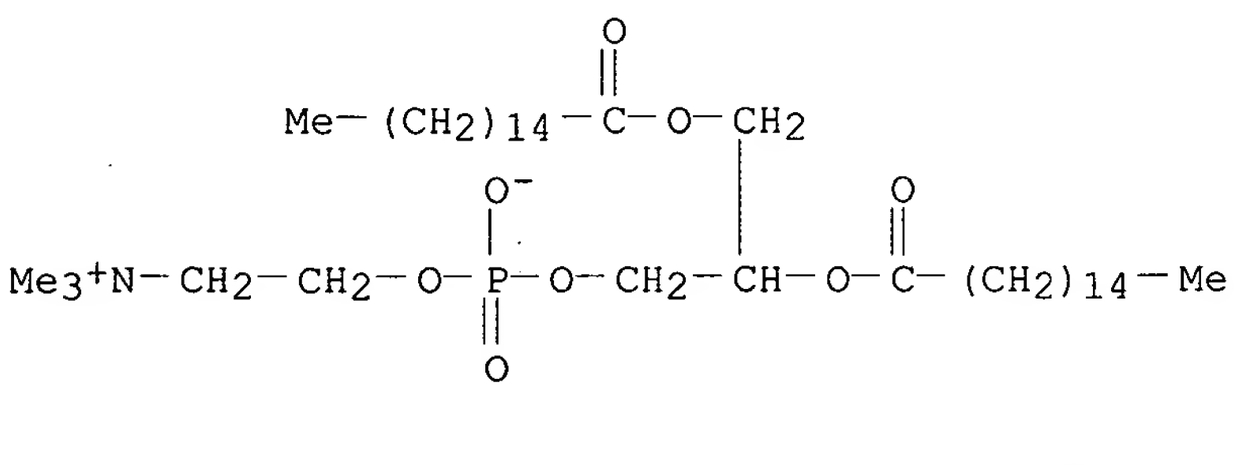
REFERENCE 8: 135:284583

REFERENCE 9: 135:277878

REFERENCE 10: 135:277762

L80 ANSWER 19 OF 24 REGISTRY COPYRIGHT 2001 ACS
RN **2644-64-6** REGISTRY
CN 3,5,9-Trioxa-4-phosphapentacosan-1-aminium, 4-hydroxy-N,N,N-trimethyl-10-oxo-7-[(1-oxohexadecyl)oxy]-, inner salt, 4-oxide (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 3,5,9-Trioxa-4-phosphapentacosan-1-aminium, 4-hydroxy-N,N,N-trimethyl-10-oxo-7-[(1-oxohexadecyl)oxy]-, hydroxide, inner salt, 4-oxide
CN Choline, hydroxide, dihydrogen phosphate, inner salt, ester with 1,2-dipalmitin (8CI)
CN Choline, phosphate, ester with 1,2-dipalmitin (6CI)
OTHER NAMES:
CN (.+-.)-.beta.,.gamma.-Dipalmitoyl-.alpha.-lecithin
CN .alpha.,.beta.-Dipalmitoylphosphatidylcholine
CN .alpha.-Glycerophosphorylcholine, .beta.,.gamma.-palmitoyl-
CN .beta.,.gamma.-Dipalmitoyl-DL-.alpha.-glycerylphosphorylcholine
CN .beta.,.gamma.-Dipalmitoyl-DL-.alpha.-lecithin
CN .beta.,.gamma.-Dipalmitoyl-DL-.alpha.-phosphatidylcholine
CN .beta.,.gamma.-Dipalmitoyl-DL-phosphatidylcholine
CN .beta.,.gamma.-Dipalmitoyllecithin
CN 1,2-Dihexadecanoyl phosphatidylcholine
CN 1,2-Dihexadecanoyl-rac-glycerol-3-phosphorylcholine
CN 1,2-Dipalmitoyl-.alpha.-phosphatidylcholine
CN 1,2-Dipalmitoyl-3-phosphatidyl choline
CN 1,2-Dipalmitoyl-3-phosphatidylcholine
CN 1,2-Dipalmitoyl-DL-.alpha.-phosphatidylcholine
CN 1,2-Dipalmitoyl-DL-phosphatidylcholine
CN 1,2-Dipalmitoylglycerol-3-phosphorylcholine
CN 1,2-Dipalmitoylglycerophosphorylcholine
CN 1,2-Dipalmitoyllecithin
CN 1,2-Dipalmitoylphosphatidylcholine
CN 1-Palmitoyl-2-palmitoylphosphatidylcholine

CN Coatsome MC 6060
CN Dihexadecanoyl phosphatidylcholine
CN Dipalmitoyl glycerophosphorylcholine
CN Dipalmitoyl-dl-.alpha.-lecithin
CN Dipalmitoyl-DL-.alpha.-phosphatidylcholine
CN Dipalmitoylglycerophosphocholine
CN Dipalmitoyllecithin
CN Dipalmitoylphosphatidylcholine
CN Dipalmitoylphosphocholine
CN DL-.alpha.-DPPC
CN DL-.beta.,.gamma.-Dipalmitoyl-.alpha.-lecithin
CN DL-.beta.,.gamma.-Dipalmitoyl-.alpha.-phosphatidylcholine
CN dl-1,2-Dipalmitoyl-3-phosphatidylcholine
CN DL-3-Dipalmitoylphosphatidylcholine
CN DL-Dipalmitoyl-.alpha.-lecithin
CN DL-Dipalmitoyl-.alpha.-phosphatidylcholine
CN DL-Dipalmitoyllecithin
CN DL-Dipalmitoylphosphatidylcholine
CN DPPC
CN DPPC (phosphatide)
CN rac-1,2-Dipalmitoylglycerol-3-phosphorylcholine
CN rac-1,2-Dipalmitoylphosphatidylcholine
FS 3D CONCORD
DR 159022-81-8, 173839-68-4, 2797-68-4, 67118-46-1, 36441-53-9, 82623-33-4, 90289-55-7, 107041-15-6, 215369-06-5
MF C40 H80 N O8 P
CI COM
LC STN Files: ADISNEWS, AGRICOLA, BEILSTEIN*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CEN, CHEMCATS, CHEMINFORMRX, CHEMLIST, CIN, CSCHEM, EMBASE, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, NIOSHTIC, PIRA, PROMT, SPECINFO, TOXLIT, USPATFULL
(*File contains numerically searchable property data)
Other Sources: EINECS**
(**Enter CHEMLIST File for up-to-date regulatory information)



5170 REFERENCES IN FILE CA (1967 TO DATE)
61 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
5174 REFERENCES IN FILE CAPLUS (1967 TO DATE)
16 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 135:308912

REFERENCE 2: 135:298281

REFERENCE 3: 135:293972

REFERENCE 4: 135:293815

REFERENCE 5: 135:287507

REFERENCE 6: 135:285242

REFERENCE 7: 135:284780

REFERENCE 8: 135:284779

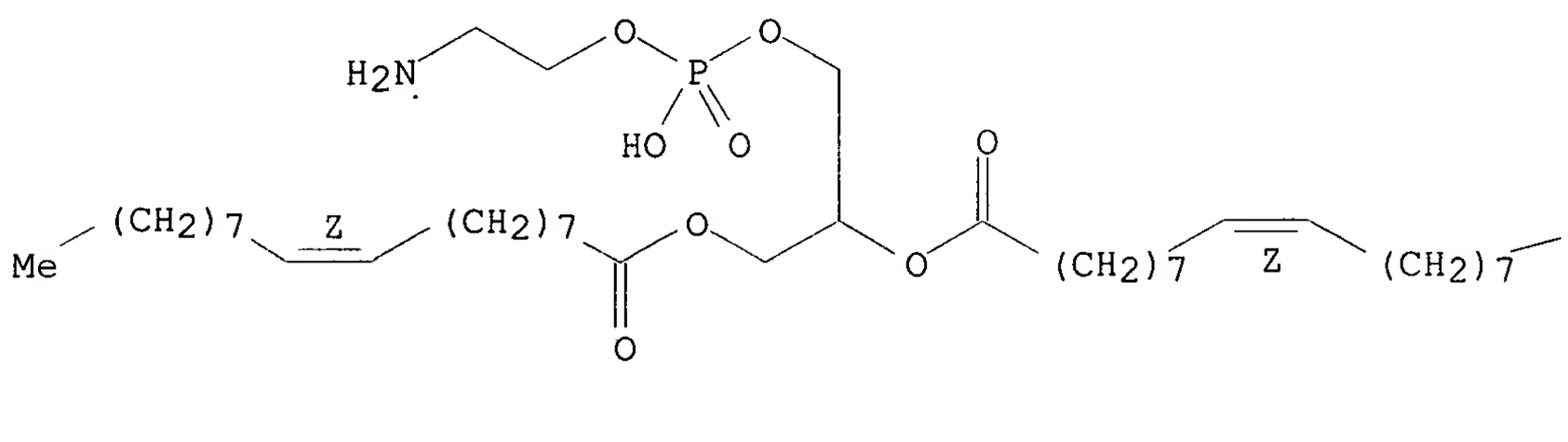
REFERENCE 9: 135:269032

REFERENCE 10: 135:269031

L80 ANSWER 20 OF 24 REGISTRY COPYRIGHT 2001 ACS
RN **2462-63-7** REGISTRY
CN 9-Octadecenoic acid (9Z)-, 1-[[[(2-aminoethoxy)hydroxyphosphinyl]oxy]methy l]-1,2-ethanediyl ester (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 9-Octadecenoic acid (Z)-, 1-[[[(2-aminoethoxy)hydroxyphosphinyl]oxy]methyl]-1,2-ethanediyl ester
CN Ethanol, 2-amino-, dihydrogen phosphate (ester), monoester with 1,2-diolein (8CI)
CN Olein, 1,2-di-, 2-aminoethyl hydrogen phosphate (8CI)
CN Olein, 1,2-di-, dihydrogen phosphate, 2-aminoethyl ester (7CI)
CN Olein, 1,2-di-, phosphate, 2-aminoethyl ester (6CI)
OTHER NAMES:
CN 1,2-Dioleoyl phosphatidyl ethanolamine
CN Dioleoyl (glycerophospho)ethanolamine
CN Dioleoyl phosphatidylethanolamine
CN DL-Dioleoylphosphatidylethanolamine
CN DOPE
CN LipofectACE
FS STEREOSEARCH
DR 159317-98-3, 5683-54-5
MF C41 H78 N O8 P
CI COM
LC STN Files: AGRICOLA, BEILSTEIN*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CANCERLIT, CAOLD, CAPLUS, CSCHEM, EMBASE, IPA, MEDLINE, PROMT, TOXLIT, USPATFULL
(*File contains numerically searchable property data)

Double bond geometry as shown.

PAGE 1-A



PAGE 1-B

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

856 REFERENCES IN FILE CA (1967 TO DATE)
43 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
859 REFERENCES IN FILE CAPLUS (1967 TO DATE)
19 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 135:303132

REFERENCE 2: 135:293972

REFERENCE 3: 135:282787

REFERENCE 4: 135:278003

REFERENCE 5: 135:269164

REFERENCE 6: 135:262222

REFERENCE 7: 135:262138

REFERENCE 8: 135:253467

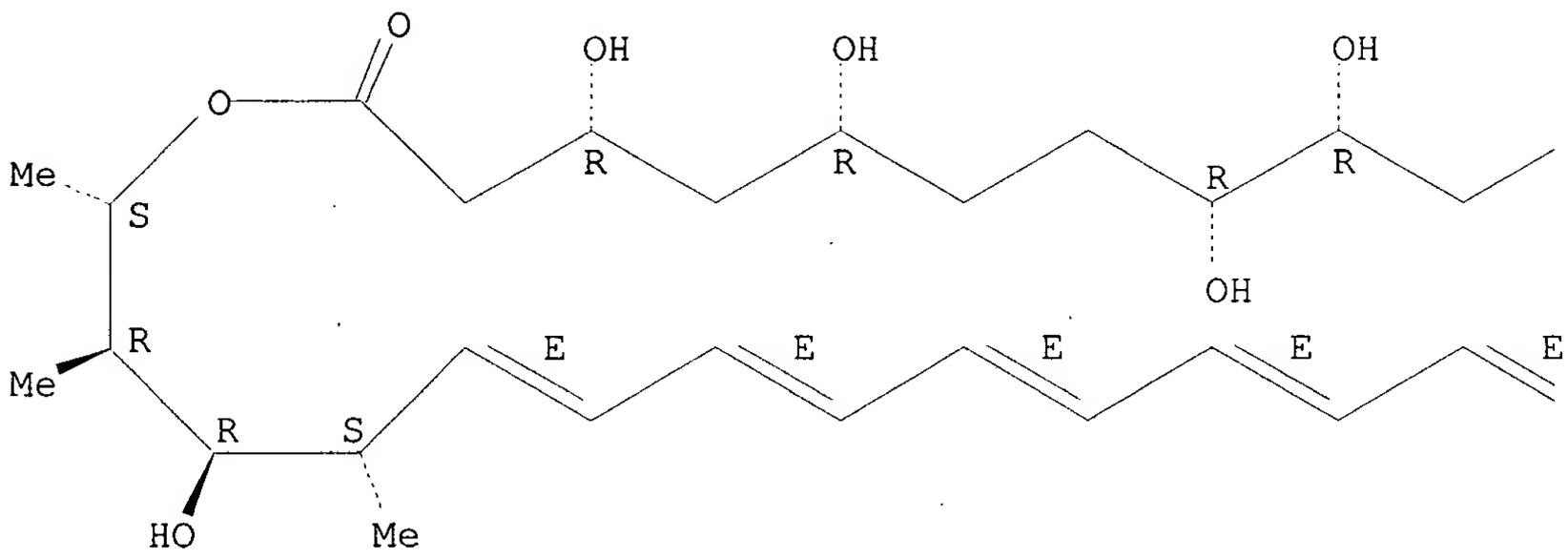
REFERENCE 9: 135:247192

REFERENCE 10: 135:247081

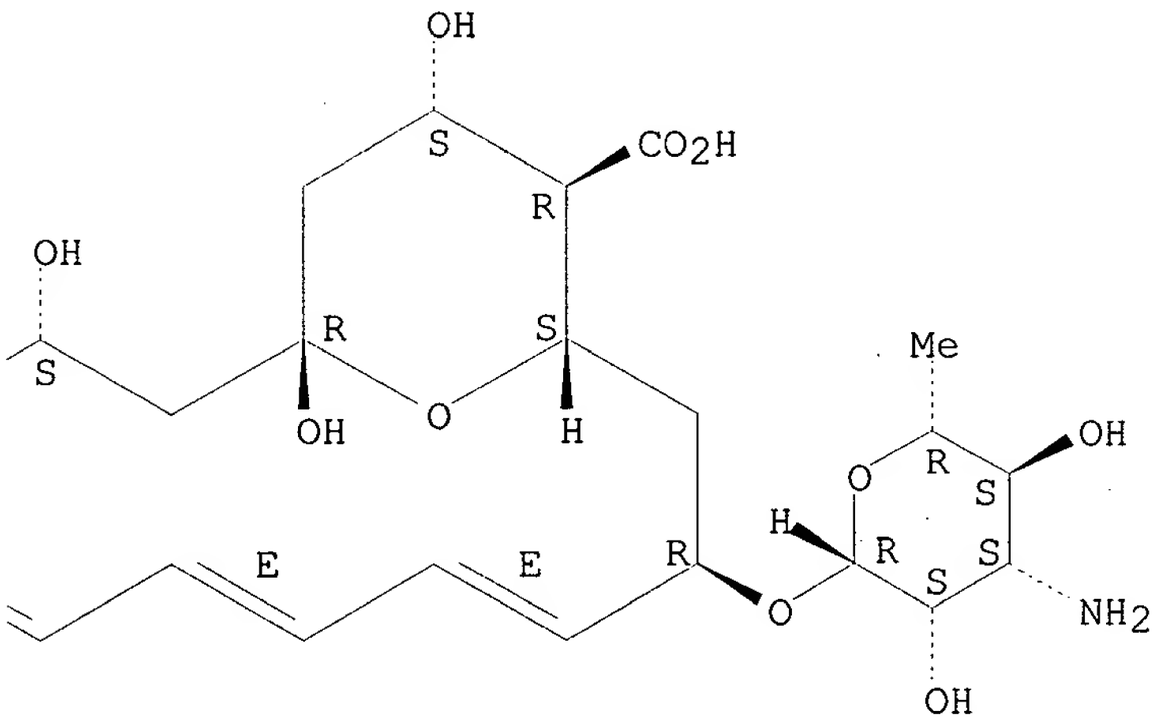
L80 ANSWER 21 OF 24 REGISTRY COPYRIGHT 2001 ACS
RN **1397-89-3** REGISTRY
CN Amphotericin B (8CI, 9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Fungizone (7CI)
OTHER NAMES:
CN 14,39-Dioxabicyclo[33.3.1]nonatriaconta-19,21,23,25,27,29,31-heptaene-36-carboxylic acid, 33-[(3-amino-3,6-dideoxy-.beta.-D-mannopyranosyl)oxy]-1,3,5,6,9,11,17,37-octahydroxy-15,16,18-trimethyl-13-oxo-, [1R-(1R*,3S*,5R*,6R*,9R*,11R*,15S*,16R*,17R*,18S*,19E,21E,23E,25E,27E,29E,31E,33R*,35S*,36R*,37S*)]-
CN Abelcet
CN AmBisome
CN Ampho-Moronal
CN Fungilin
CN LNS-AmB
CN NS 718
CN [1R-(1R*,3S*,5R*,6R*,9R*,11R*,15S*,16R*,17R*,18S*,19E,21E,23E,25E,27E,29E,31E,33R*,35S*,36R*,37S*)]-33-[(3-Amino-3,6-dideoxy-.beta.-D-mannopyranosyl)oxy]-1,3,5,6,9,11,17,37-octahydroxy-15,16,18-trimethyl-13-oxo-14,39-dioxabicyclo[33.3.1]nonatriaconta-19,21,23,25,27,29,31-heptaene-36-carboxylic acid
AR 30652-87-0
FS STEREOSEARCH
DR 170451-78-2, 8055-20-7, 54482-28-9, 30782-62-8
MF C47 H73 N O17
CI COM
LC STN Files: ADISINSIGHT, ADISNEWS, AGRICOLA, ANABSTR, BEILSTEIN*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CABA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CBNB, CEN, CHEMCATS, CHEMLIST, CIN, CSCHEM, DDFU, DIOGENES, DRUGNL, DRUGPAT, DRUGU, DRUGUPDATES, EMBASE, HSDB*, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MRCK*, MSDS-OHS, NIOSHTIC, PHAR, PHARMASEARCH, PROMT, RTECS*, TOXLIT, USAN, USPATFULL, VETU
(*File contains numerically searchable property data)
Other Sources: EINECS**, WHO
(**Enter CHEMLIST File for up-to-date regulatory information)

Absolute stereochemistry.
Double bond geometry as shown.

PAGE 1-A



PAGE 1-B



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

3696 REFERENCES IN FILE CA (1967 TO DATE)
127 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
3706 REFERENCES IN FILE CAPLUS (1967 TO DATE)
1 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 135:300924

REFERENCE 2: 135:298350

REFERENCE 3: 135:298281

REFERENCE 4: 135:293951

REFERENCE 5: 135:293853

REFERENCE 6: 135:286628

REFERENCE 7: 135:285608

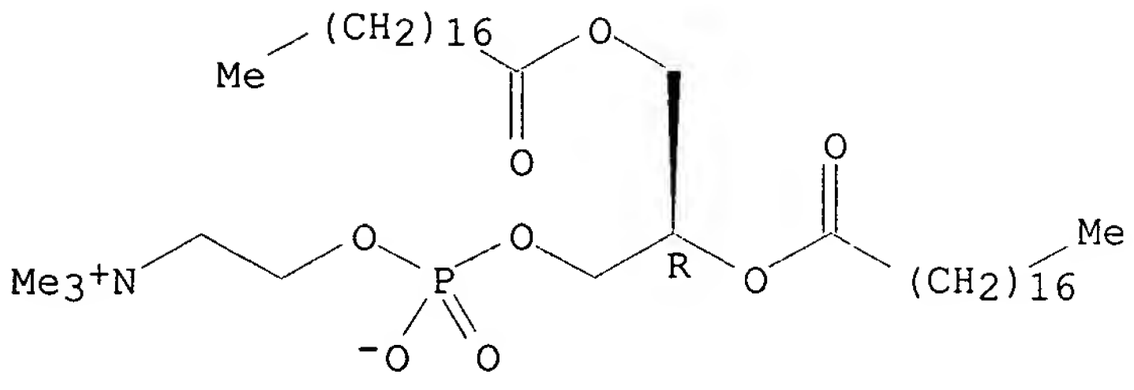
REFERENCE 8: 135:285606

REFERENCE 9: 135:285582

REFERENCE 10: 135:285579

L80 ANSWER 22 OF 24 REGISTRY COPYRIGHT 2001 ACS
RN **816-94-4** REGISTRY
CN 3,5,9-Trioxa-4-phosphaheptacosan-1-aminium, 4-hydroxy-N,N,N-trimethyl-10-oxo-7-[(1-oxooctadecyl)oxy]-, inner salt, 4-oxide, (7R)- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 3,5,9-Trioxa-4-phosphaheptacosan-1-aminium, 4-hydroxy-N,N,N-trimethyl-10-oxo-7-[(1-oxooctadecyl)oxy]-, hydroxide, inner salt, 4-oxide, (R)-
CN Choline phosphate, 3-ester with L-1,2-distearin (6CI)
CN Choline, hydroxide, dihydrogen phosphate, inner salt, ester with 1,2-distearin, L- (8CI)
OTHER NAMES:
CN .beta.,.gamma.-Distearoyl L-.alpha.-phosphatidylcholine
CN 1,2-Bis(stearoyl)-sn-glycero-3-phosphocholine
CN 1,2-Dioctadecanoyl-sn-glycero-3-phosphocholine
CN 1,2-Distearoyl-3-sn-phosphatidylcholine
CN 1,2-Distearoyl-L-.alpha.-glycerophosphocholine
CN 1,2-Distearoyl-sn-3-phosphocholine
CN 1,2-Distearoyl-sn-glycero-3-phosphocholine
CN 1,2-Distearoyl-sn-glycero-3-phosphocholine
CN 1,2-Distearoyl-sn-glycero-3-phosphorylcholine
CN 1,2-Distearoyl-sn-glycerophosphocholine
CN 1,2-L-.alpha.-Distearoylphosphatidylcholine
CN 3,5,9-Trioxa-4-phosphaheptacosan-1-aminium, 4-hydroxy-N,N,N-trimethyl-10-oxo-7-[(1-oxooctadecyl)oxy]-, inner salt, 4-oxide, (R)-
CN Dioctadecanoyl-L-.alpha.-glycerophosphorylcholine
CN Distearoyl sn-3-phosphatidylcholine
CN Distearoyl-L-.alpha.-glycerophosphocholine
CN Distearoyl-L-.alpha.-lecithin
CN Distearoyl-L-.alpha.-phosphatidylcholine
CN Distearoyl-sn-glycero-3-phosphocholine
CN Distearoylphosphatidylcholine
CN DSPC
CN L-.alpha.-Distearoylphosphatidylcholine
CN L-.beta.,.gamma.-Distearoyl-.alpha.-lecithin
CN L-.beta.,.gamma.-Distearoyl-.alpha.-phosphatidylcholine
CN L-Distearoyllecithin
FS STEREOSEARCH
DR 18603-43-5, 82617-24-1, 81534-16-9
MF C44 H88 N O8 P
CI COM
LC STN Files: AGRICOLA, BEILSTEIN*, BIOBUSINESS, BIOSIS, CA, CAOLD, CAPLUS, CASREACT, CHEMCATS, CHEMLIST, CSCHEM, IFICDB, IFIPAT, IFIUDB, IPA, SPECINFO, TOXLIT, USPATFULL
(*File contains numerically searchable property data)
Other Sources: EINECS**
(**Enter CHEMLIST File for up-to-date regulatory information)

Absolute stereochemistry.



695 REFERENCES IN FILE CA (1967 TO DATE)
6 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
695 REFERENCES IN FILE CAPLUS (1967 TO DATE)
3 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 135:300223

REFERENCE 2: 135:300217

REFERENCE 3: 135:293963

REFERENCE 4: 135:293805

REFERENCE 5: 135:277887

REFERENCE 6: 135:277762

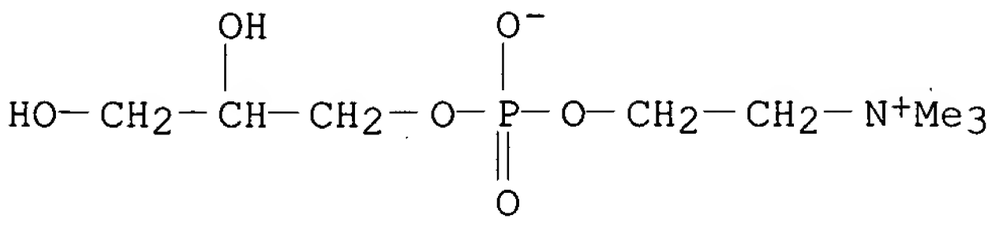
REFERENCE 7: 135:262617

REFERENCE 8: 135:247192

REFERENCE 9: 135:247084

REFERENCE 10: 135:238799

L80 ANSWER 23 OF 24 REGISTRY COPYRIGHT 2001 ACS
RN **563-24-6** REGISTRY
CN Ethanaminium, 2-[[(2,3-dihydroxypropoxy)hydroxyphosphinyl]oxy]-N,N,N-trimethyl-, inner salt (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Choline, hydroxide, 2,3-dihydroxypropyl hydrogen phosphate, inner salt (8CI)
OTHER NAMES:
CN .alpha.-Glycerophosphorylcholine
CN .alpha.-Glycerylphosphorylcholine
CN Choline, hydrogen glycerophosphate (ester)
CN Glycerol 3-phosphocholine
CN Glycerol phosphorylcholine
CN Glycerol-3-phosphatidylcholine
CN Glycerophosphatidylcholine
CN Glycerophosphocholine
CN Glycerophosphoric acid choline ester
CN Glycerophosphorylcholine
FS 3D CONCORD
DR 34688-34-1, 107208-73-1
MF C8 H20 N O6 P
CI COM
LC STN Files: AGRICOLA, ANABSTR, BEILSTEIN*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CEN, CSCHEM, EMBASE, MEDLINE, PROMT, TOXLIT, USPATFULL
(*File contains numerically searchable property data)



740 REFERENCES IN FILE CA (1967 TO DATE)
33 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
740 REFERENCES IN FILE CAPLUS (1967 TO DATE)
7 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 135:299749

REFERENCE 2: 135:270878

REFERENCE 3: 135:254997

REFERENCE 4: 135:224125

REFERENCE 5: 135:215574

REFERENCE 6: 135:206912

REFERENCE 7: 135:205043

REFERENCE 8: 135:200189

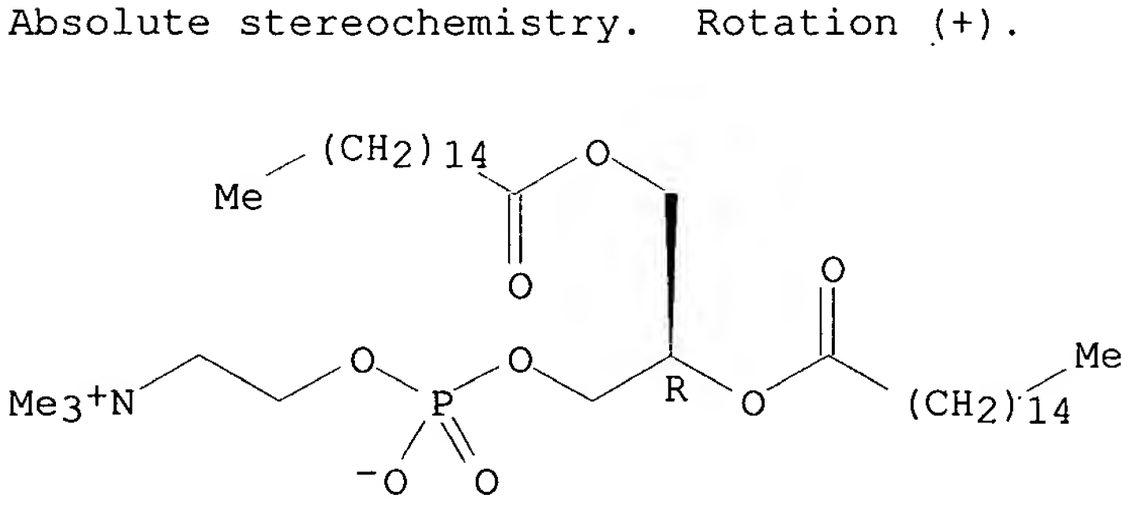
REFERENCE 9: 135:193904

REFERENCE 10: 135:178704

L80 ANSWER 24 OF 24 REGISTRY COPYRIGHT 2001 ACS
RN **63-89-8** REGISTRY
CN 3,5,9-Trioxa-4-phosphapentacosan-1-aminium, 4-hydroxy-N,N,N-trimethyl-10-oxo-7-[(1-oxohexadecyl)oxy]-, inner salt, 4-oxide, (7R)- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 3,5,9-Trioxa-4-phosphapentacosan-1-aminium, 4-hydroxy-N,N,N-trimethyl-10-oxo-7-[(1-oxohexadecyl)oxy]-, hydroxide, inner salt, 4-oxide, (R)-
CN Choline, hydroxide, dihydrogen phosphate, inner salt, ester with 1,2-dipalmitin, L- (8CI)
OTHER NAMES:
CN .beta.,.gamma.-Dipalmitoyl L-.alpha.-phosphatidylcholine
CN .beta.,.gamma.-Dipalmitoyl-L-(.alpha.)-lecithin
CN .beta.,.gamma.-Dipalmitoyl-L-phosphatidylcholine
CN 1,2-Bis(hexadecanoyl)-sn-glycero-3-phosphocholine
CN 1,2-Bis(palmitoyl)-sn-glycero-3-phosphocholine
CN 1,2-Dihexadecanoyl-sn-glycero-3-phosphocholine
CN 1,2-Dihexadecanoyl-sn-glycero-3-phosphorylcholine
CN 1,2-Dihexadecanoyl-sn-glycerol-3-phosphorylcholine
CN 1,2-Dipalmitoyl-3-sn-phosphatidylcholine
CN 1,2-Dipalmitoyl-L-.alpha.-lecithin
CN 1,2-Dipalmitoyl-L-.alpha.-phosphatidylcholine
CN 1,2-Dipalmitoyl-L-3-phosphatidylcholine
CN 1,2-Dipalmitoyl-L-lecithin
CN 1,2-Dipalmitoyl-L-phosphatidylcholine
CN 1,2-Dipalmitoyl-sn-3-glycerophosphocholine
CN 1,2-Dipalmitoyl-sn-glycero-3-phosphatidylcholine
CN 1,2-Dipalmitoyl-sn-glycero-3-phosphocholine
CN 1,2-Dipalmitoyl-sn-glycero-3-phosphorylcholine
CN 1,2-Dipalmitoyl-sn-glycero-3-phosphorylcholine
CN 1,2-Dipalmitoyl-sn-glycerol-3-phosphocholine
CN 1,2-Dipalmitoyl-sn-glycerophosphocholine
CN 1,2-Dipalmitoyl-sn-glycerophosphorylcholine

CN 1,2-Dipalmitoyl-sn-glyceryl-3-phosphocholine
CN 1,2-Dipalmitoyl-sn-phosphatidylcholine
CN 1,2-Dipalmitoylglycero-3-phosphocholine
CN 1,2-L-.alpha.-Dipalmitoylphosphatidylcholine
CN 129Y83
CN 3,5,9-Trioxa-4-phosphapentacosan-1-aminium, 4-hydroxy-N,N,N-trimethyl-10-oxo-7-[(1-oxohexadecyl)oxy]-, inner salt, 4-oxide, (R)-
CN Colfosceril palmitate
CN Dihexadecanoyl-sn-glycero-3-phosphocholine
CN Dipalmitoyl L-.alpha.-phosphatidylcholine
CN Dipalmitoyl-L-.alpha.-lecithin
CN Dipalmitoyl-L-.alpha.-phosphatidylcholine
CN Dipalmitoyl-L-3-glycerylphosphorylcholine
CN Dipalmitoyl-sn-3-phosphatidylcholine
CN Dipalmitoylphosphatidylcholine
CN DPPC
CN L-.alpha.-1,2-Dipalmitoyl lecithin
CN L-.alpha.-Dipalmitoylecithin
CN L-.alpha.-Dipalmitoyllecithin
CN L-.alpha.-Dipalmitoylphosphatidylcholine
CN L-.alpha.-DPPC
CN L-.beta.,.gamma.-Dipalmitoyl-.alpha.-lecithin
CN L-.beta.,.gamma.-Dipalmitoyl-.alpha.-phosphatidylcholine
CN L-.beta.,.gamma.-Dipalmitoylphosphatidylcholine
CN L-1,2-Dipalmitoyl-.alpha.-lecithin
CN L-1,2-Dipalmitoylphosphatidylcholine
CN L-Dipalmitoyl lecithin
ADDITIONAL NAMES NOT AVAILABLE IN THIS FORMAT - Use FCN, FIDE, or ALL for DISPLAY
FS STEREOSEARCH
DR 50669-86-8
MF C40 H80 N O8 P
CI COM
LC STN Files: ADISNEWS, AGRICOLA, ANABSTR, BEILSTEIN*, BIOBUSINESS, BIOSIS, CA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CEN, CHEMCATS, CHEMINFORMRX, CHEMLIST, CIN, CSCHEM, CSNB, DDFU, DETHERM*, DIOGENES, DRUGNL, DRUGU, DRUGUPDATES, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MRCK*, PHAR, PROMT, TOXLIT, USAN, USPATFULL
(*File contains numerically searchable property data)
Other Sources: EINECS**
(**Enter CHEMLIST File for up-to-date regulatory information)

Absolute stereochemistry. Rotation (+).



3014 REFERENCES IN FILE CA (1967 TO DATE)
33 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
3020 REFERENCES IN FILE CAPLUS (1967 TO DATE)
8 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 135:308926

REFERENCE 2: 135:308721

REFERENCE 3: 135:302491

REFERENCE 4: 135:302095

REFERENCE 5: 135:301384

REFERENCE 6: 135:299772

REFERENCE 7: 135:299730

REFERENCE 8: 135:298791

REFERENCE 9: 135:293805

REFERENCE 10: 135:285287